



REPORT OF THE RESEARCH QUALITY REVIEW

UNIVERSITY COLLEGE CORK
2015



UCC

University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

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Introduction

The University College Cork Research Quality Review of 2015 resulted in notable improvements in reported research performance, with improved scores testifying to higher levels of research attainment since 2009 in a context of increased international competitiveness, on the one hand, and severe resource constraints, on the other. All staff of the University are to be commended on this very positive outcome. The review also records clear evidence of improved leadership, support and management in the area of research, over and above improvements in scoring, so providing an additional basis for future strategic planning across the University.

UCC was the first Irish University to conduct an institution-wide Research Quality Review in 2008/09. The initiative was endorsed positively in the report of the University's Institutional Review as "a remarkable exercise that deserves wider notice throughout Ireland ... a significant stimulus to its work as a research institution" (IRIU Report UCC, 2013).

The second cycle of Research Quality Review took place in 2014/15. In February 2016 under the Strategic Dialogue funding process, the HEA assessment of UCC's performance highlighted a "most commendable research performance, measured with reference to appropriate benchmarked peer institutions and aligned to an ongoing performance review of institutional research activity".

This report is comprised of three distinct sections:

- Section A** details the summary report of the RQR, an analysis of the Panel reports;
- Section B** outlines the RQR process;
- Section C** contains the full reports of all of the Panels.

Section A: Summary Report of RQR 2015

Scope and objectives of the Research Quality Review (RQR) 2014/15

The RQR is a quality review process under the remit of the Quality Promotion Committee (QPC), chaired by the President of UCC. QPC delegated responsibility for the operational aspects of the RQR to the RQR Steering Committee (see Appendix 2) composed of members of QPC and Academic Council Research and Innovation Committee (ACRIC) with external oversight provided by Professor Sir Drummond Bone, Master of Balliol College, Oxford. The review was project-managed by the Quality Promotion Unit (QPU). The terms of reference for the review were approved by the Academic Council in December 2012, following consultations with the Colleges in the light of the first cycle. The objectives of the exercise (as approved by AC and outlined in the RQR guidelines) were:

- To provide an independent assessment of the quality and level of research activity at UCC at Department/School/Research Institute level, benchmarked on a disciplinary basis;
- To provide a means of international comparability across research units;
- To provide an overview of the status of research on a broad disciplinary-based level across the University;

- To provide information at a sufficient level of granularity to facilitate the Office of the Vice President for Research and Innovation (OVPRI) in its assessment of all research units and in its planning for the future levels of support needed;
- To inform strategic planning in UCC.

Purpose of this report

The reports of the 15 Panels appointed to carry out the Research Quality Review provide a significant body of peer review information about the quality and extent of research at UCC. In line with both the institutional quality objectives of the review process and UCC's HEA Institutional Compact, the purpose of this report is, at institutional level, to:

- Document salient elements of the conduct of the 2015 review;
- Highlight recurrent themes and issues across all RQR Reports and thereby identify opportunities for institutional learning and development;
- Compare the outcomes of the 2015 review relative to those of the 2009 review.

This report draws together a summary of Panels' assessments and advice documented in the Research Quality Review reports. This summary information is provided to highlight areas which could be considered further through internal University dialogue and reflection to agree and prioritise actions for the future.

The report is organised as follows:

- Section 1** Executive summary
- Section 2** Overview provides a high level summary of the Panels' reports and sets the context for the more detailed treatment of reports
- Section 3** Summary of RQR Reports sets out the key themes across the main report sections and includes specific commentary from Panels about the Research Quality Review process
- Section 4** Provides an outline of the next steps to be taken.

Approach to analysis

Analysis of the RQR Reports was undertaken by a small working group drawn from ACRIC, QPC and QPU (see Appendix 1). The group worked with unscored reports and sought to identify key recurring University-level themes across reports as follows:

- For each of the Research Activity Indicators 1-6 (RAI) achievements and areas requiring further development;
- Areas of good practice and areas for development;
- Recommendations to the University.

Members of the group assumed specific responsibility for each of these sections and undertook a close reading of the relevant section across all reports. Group members provided a written summary for wider group discussion, which allowed recurring themes across all reports to be highlighted.

A comparison of scores between the first and second cycle of RQR was undertaken. This comparison was limited by variations in the application of scores between first and second cycle, whereby some Panels in the first cycle chose to report using half-point scores, in comparison to the second cycle when Panels used whole numbers only.

Details of operational aspects of RQR which require refinement for the future were compiled. These were identified during the course of the RQR exercise, from the final RQR reports and internal feedback.

In finalising this report, the group sought the assistance of some critical readers drawn from the original RQR Steering Committee, Heads of Colleges and senior academic colleagues. The group is extremely grateful for their contributions.

1. Executive Summary

In general, the Panels responses to the RQR were very positive, with many explicit references to the importance of such an exercise in shaping and supporting research strategy across the University. Reviewers reported with confidence that they had been provided with sufficient information to produce a fair and thorough evaluation, and on the whole observed improvements across the University when compared with the 2009 exercise. This is reflected in their overall research evaluation scores for 2015, which show that 57% of units were assessed at a score of 4 or greater (appendix 3: figure 1). The commendable performance of staff and the quality of research produced, given the financial and staffing constraints was also remarked upon repeatedly by Panels. Postgraduate education was considered to be of very good quality, with particular commendations for the introduction of a structured PhD programme along with the excellent quality of supervision and mentoring.

Review Panels were particularly complimentary about the evidence of deep and positive engagement by individuals, departments and units, and stressed that, where evident, this was considered to have had a very beneficial impact on research culture, underpinning the development of an effective research strategy. Strong recognition of UCC's vision in commissioning the review was accompanied by insistence on the importance of following up on outcomes and recommendations. Given the high demands on staff and resources involved in the RQR process, it was felt to be essential that staff in all departments should experience some tangible impact and value from the exercise.



Key recommendations for further development

- Research strategy and research management are variable across the institution. Where well developed, research is often internationally excellent.
- Development of more coherent approaches to publication is advised to ensure that research is disseminated through top publications.
- Reliance on a small cohort of researchers to provide research leadership presents an institutional risk and there is a need to increase the number of researchers achieving high quality outputs.
- Research and teaching loads should be considered further through the workload allocation model and appraisal mechanisms, recognising implications for research output and impact when judged internationally, along with expectations for all staff to perform at a high research-active level.
- Flattened staffing structures, short-term contracts and the absence of promotional opportunities for staff have consequences for succession planning to maintain and develop leadership for research activity.
- Investment is required in peer esteem activities to support increased visibility of research activities and to raise the reputational profile of the University.
- Improvements in the physical infrastructure are needed to remove existing discrepancies between facilities which are world class and those which are in need of upgrading and replacement.
- Diversification of funding sources may be required, along with encouragement for more staff to seek funding from a wider range of sources and appropriate mentoring and support for early career staff in securing funding opportunities.
- Greater consideration needs to be given to articulating the broader impact of research, which, given the focus on this in national and European research policy, should be strongly adopted, as it will enhance the competitiveness of UCC research in both national and European funding programmes.
- Research support infrastructure is well developed at University level, but there is a need for greater support, often of a tailored nature at a local level, as well as supports to encourage research collaboration and cooperation in inter- and multi-disciplinary research.

2. Overview

The Research Quality Review is a key method through which UCC seeks to demonstrate the quality of its research output, standing and above all performance with regard to internationally-recognised norms. The extensive use made of peer review in the course of the exercise is a key factor in achieving this outcome.

It is therefore vital for the University as a whole that it is seen to conduct the process well, with transparency, goodwill and intent to act on the findings. As well as the statutory requirement that the exercise fulfils, the RQR is also one means by which UCC presents its research to the outside world, and is an expression of its work as contributions on the part of collective entities, as well as that of individuals.

This overview draws attention to three key areas of interest that emerge from the Panels' reports:

- Practice, structure and conduct of the RQR;
- Comments about infrastructure and context;
- Suggestions for maintaining and enhancing UCC's research profile.

Practice, structure and conduct of the RQR

The 2014/15 RQR is the second iteration of UCC's innovative model for self-reflection through benchmarking, external peer review and analysis. It has attempted to build a picture of what has been done, with a view to establishing future directions for improvement, expansion, or simply continuing with existing good practice. At all times, Panels sought to offer constructive advice to help units reflect on future directions for their activity. Most Panels commented on the exercise itself, and the vast majority explicitly commended UCC in general and specifically, the QPU, the Steering Committee and the units that were surveyed. In this regard, the exercise was a success.

For the Panels that considered the outcomes of the previous RQR exercise (2008/09), the comments frequently suggested that actions taken as a result of that review had proved to be catalysts for change, development, adjustment or clarification. It is quite clear from the evidence of the Panels' reports that positive change had come about as a result of the previous review, and in the preparation for the current one. It is to be hoped that the many coherent and systematic suggestions made by Panels can feed into the continued recalibration of research and its presentation. These issues need strategic consideration and commitment to action at all levels in the University in a manner that enables and supports the development of a collective ownership of research quality at UCC.

Much work went into establishing the guidelines and parameters of the RQR. The RQR Steering Committee met with each Panel to ensure that they were fully aware of prevailing contexts, and the ways in which research could be measured and/or quantified beyond existing peer review, in all of the disciplines concerned. While the outline terms and conditions for the review were approved by Academic Council in December 2012, general understanding of the parameters and full implications of the exercise was achieved across the University as a whole relatively late in the process; this is a factor to be noted for the next process, as this is clearly one reason why several Panels referred to the choice of outputs as being in some way 'poorly chosen'. That said, the units that paid sustained attention to international standards and to the advice of the Steering Committee were able to maximise the strength of their submission, and will likely benefit the most from the developmental aspect of this RQR.

A number of innovations introduced in this cycle should be noted. The definitions of research were considerably expanded, thus facilitating submissions in areas of pedagogical research and in creative practice. Research activity in Research Institutes Centres and Units (RICUs) was much more generally integrated into

the review, either through parent schools or on the basis of direct submissions to the relevant Panels. A census process formed part of the preparations for the review, thereby facilitating the appointment of Panels with the requisite expertise. Detailed guidance on submissions was provided to units, together with templates for the various elements required (for instance, a cover form was devised for RAI 1 to allow staff members to summarise the significance of an item and the reasons for its selection). Guidance was provided on special circumstances and how these should be addressed by the Panels (following engagement on this point with the Panel Chairs in the course of their preliminary visits). By far the greater part of the review work was carried out by reviewers working remotely from UCC. This facilitated more direct and closer engagement with the Panel Chairs and the Disciplinary Vice-Chairs, with the Panel Chairs making a preliminary visit in advance of the submission date where they could be closely briefed on the guidelines for the review. The online frameworks for submissions and scoring developed by the Steering Committee with support from IT services, though simple and economical in design, proved accessible and above all robust in view of the scale of the exercise. The review, in brief, was considerably larger in scale and complexity than in 2009, with a number of improvements designed to strengthen its contribution to quality improvement.

The review shows that UCC is a fully research-active university with many areas of excellence, and that this can be measured against international expectations at discipline level, as well as more generic administrative norms. The structures through which it conducts its research were held to be proper, broadly supportive, and almost uniformly deemed to foster research of the highest level as practice and in the form of outputs. That the review shows this is not just testament to UCC's researchers but also to the value of the exercise itself.

Infrastructure and context

The Panels were keenly aware of the troubled economic background since the last review in 2008/09. They invariably factored this into their assessment where relevant (e.g. in respect of funding performance at national level) and into their suggestions and benchmarking. The repeated evidence of the serious effect the financial crisis has had is striking, nonetheless, and as noted by many Panels, this means one needs to have realistic expectations as to the research competitiveness of Irish institutions.

Set against this national context, UCC has performed very well, according to the vast majority of Panels. A substantial majority of units were judged to have high levels of outputs in terms of quality, number and citation. Many units had maintained output levels of 2008/09 with notably reduced staff levels.

Almost all Panels noted that the substantial reduction in staff had led to an increase in teaching and administrative loads of research-active staff, and this needs to be taken into account when undertaking international comparison, this being the benchmark by which the Panels performed their evaluation.

A significant number of Panels commented on the notable improvement in facilities in specific areas, and in some cases, were able to welcome significant positive change in provision of infrastructural support. Several Panels noted that the infrastructure – buildings, equipment, maintenance – could benefit from substantial improvement.

Maintaining and enhancing UCC's research profile

The majority of Panels echoed the views of units themselves in praising UCC's commitment to building an internal set of procedures, office and units to help drive the research of individual researchers and research teams, particularly with regard to identifying funding. This is an area in which UCC is performing demonstrably well, the effectiveness of which is heightened when replicated at College level.

The current RQR shows that UCC has moved to a more strategic engagement with research, with actions spanning the prioritising of centres, the appointment of research officers and the promotion of funding availability and the development of relevant policies, coupled with an institutional awareness of the need to build in engagement of individual researchers, teams, units and Colleges.

Strategic change has occurred in many units since the previous RQR, notably through the building of research clusters, targeting of seed funding, advising on publication strategy, and producing outputs in light of advice on international disciplinary expectations. In some parts of the University, there was also a notable and early engagement with the preparation of the RQR, which led to improved submissions by comparison with the earlier round.

The majority of Panels noted the difficulty in research planning in the 'variable' financial context, and while observing the extreme restraint on increasing personnel, suggested that the University support its researchers through seed funding, study leave, ECR development and regular promotion based on attainment of individuals.

Almost all Panels observed, with a critical emphasis, the high level of teaching performed by research-active staff. The immediate implication is that a significant number of staff should have their teaching load reduced in order to focus on research. However, such comments are also an observation of how well UCC integrates research and teaching, and how the institution regards the connection between the two activities in terms of researcher, student and the University as a whole.

However beneficial it is to maintain research and teaching as intertwined activities, Panels noted that this will affect competitiveness, in terms of research output, funding, esteem and impact, when judged internationally.

3. Summary of RQR Reports

3.1 RESEARCH ACTIVITY INDICATORS RAI 1-6

RAI 1 – Selected published output and RAI 2 – Total published output

In general, research outputs submitted to the Panels were of very good quality. In many instances, publication output performance was considered to be impressive, especially when viewed through the lens of high teaching and administrative loads across UCC departments.

However, most Panels were also of the view that there was scope for improvement in the quality profile of research publications within units and that strategies should be employed to produce a greater proportion of publication outputs at the higher quality levels. Too many research outputs are being published in publications judged to be “average” within the relevant discipline. Two elements were commonly cited as contributing to this situation, requiring different corrective approaches and actions:

(a) Research outputs were of a sufficient standard to publish in higher quality publications but were being disseminated via outlets perceived to be of lower quality; (b) Research outputs were not of sufficient standard to be published in higher quality publications.

In addition, it was noted that, in many units, publications considered to be of sufficient quality to merit a score of 4 or 5 were typically contributed by a small proportion of staff within the unit. This over-reliance on a small cohort of researchers represents a risk for the institution, with a resulting strategic need to increase the proportion of researchers securing research income and ultimately delivering high quality outputs. In this regard, limited opportunities for career advancement and financial constraints on attracting high-performing researchers to the University represent significant blocks.

A significant contributing factor to the quality profile of research publications within many units was the reported tension between producing a reduced number of high quality publications versus the need to be seen to be productive in terms of total numbers of publications in order to meet career progression expectations.

A number of recommendations, common to most Panels, were proposed to address these issues, which have been categorised for convenience as ‘Strategy’-focused or ‘Process’-focused:

Strategic recommendations:

1. Researchers should be supported in being more ambitious in targeting higher quality journals. A key support in this regard is the need for investment to reduce the heavy teaching and training commitments of many staff, and balance that commitment more judiciously, thus allowing more time to focus on research activity. With support at University and College levels, units should develop and implement publication strategies to ensure that their research is disseminated via the top publication outlets in their disciplines.

2. Role-model and mentorship support within units, especially for early- and mid-career researchers, is a key element in improving the impact of publication outputs. In many units, there was evidence of informal mentoring activity but the implementation of a more systematic approach would be beneficial.

3. Particularly in the Humanities and Social Sciences, there need to be more opportunities for sabbatical leave of longer duration, if researchers are to be enabled to contribute higher quality, peer-reviewed journal articles and monographs.

4. Units should be provided with the necessary institutional encouragement and support to identify the kinds of projects that have the potential to be agenda-setting, yield a higher degree of originality, and push the boundaries of the discipline. In this regard, the potential long-term impact of research, over and above citation impact and perceived journal quality, should be considered.

5. A number of Panels acknowledged that, for smaller Schools with a high teaching load across multiple specialties, it may not be feasible for all staff to be research-active at a high level. It is recommended that Schools should use their workload allocation model and appraisal mechanisms to: (a) support staff in realising their career potential in teaching or research, and; (b) provide protected time for research-active staff to develop their careers. Panels expressed the view that for future research review exercises, the institution might reconsider its present inclusive approach to research and scholarly activity, to provide research-active staff with the resources and time to bring high quality work to completion. This might be achieved through internal processes such as workload planning and/or appraisal mechanisms.

6. For most units, it is critical for their researchers and postgraduate students to have access to relevant journals and monographs, which must be supported by appropriate investment in library resources.

Process recommendations:

7. From a process perspective, in future RQR-like exercises, the University may wish to consider its guidance on the status of books and book chapters that contain no new data or interpretations. Increasingly, these are not judged to constitute “original research” in international peer review exercises and, therefore, should not be considered part of the research output profile of a unit. Institutional support and mentoring is critical in supporting early career stage researchers to target high-quality research publications and focus less on the secondary literature.

8. Similarly, for future RQR-like exercises, greater attention needs to be placed on the selection of publications for review. Whilst remaining cognisant of disciplinary norms, this process should encompass discussions on the balance between research journal versus secondary literature outputs and national versus international titles. Units should be encouraged to develop a process of internal review in order to support the selection of publications.

9. A number of staff did not have IRIS research profiles or failed to complete their research profiles in a consistent manner. IRIS profiles are a key source of data for research review and related exercises, and serve as a key dissemination channel for both researchers and their research outputs. There is an urgent need to monitor and support the ongoing maintenance of completed, up-to-date IRIS profiles, through a process of annual reporting that might be linked to the staff development review process, as well as progression and promotions procedures.

RAI 3 – Peer esteem

Most UCC researchers are actively involved in an appropriate range of activities associated with peer esteem including, but not limited to, patents filed, editorial board membership, external PhD examiners, and funding agency grant panel membership. Not surprisingly, levels of peer esteem indicators are closely correlated to the length of an individual's career; as such, units with a high proportion of early- to mid-career researchers scored less well in this category than units populated by staff with a more evenly distributed age and career profile.

In some units, indicators of peer esteem were considered to be of lower quality than their research publication outputs. Given the importance of reputational factors and assessment proxies in international ranking exercises, strategic priority should be placed on the acquisition of external indicators of esteem that appropriately reflect the real research strengths of individual staff members. This might be achieved through greater investment in conference travel and visitor/event activities to raise the international profile and visibility of researchers.

Furthermore, units should be encouraged to monitor, define and measure how their often extensive commitments to knowledge exchange, public engagement, outreach and other peer-esteem activities relate to the quality and impact of their research.

Specific recommendations for improving the level and quality of peer-esteem indicators of research staff included:

1. The provision of encouragement and supports to improve the international standing of research staff and outputs via a variety of measures, including: editorship of special issues of journals; leadership roles within research networks; volunteering to lead special themes/streams in high quality international conferences; being more pro-active in securing invitations to present seminars at international, research-active institutions; participating in external examining and review.

2. It was noted that financial supports for researchers to enable networking and dissemination of research outputs, both nationally and internationally, were no longer available. This is considered to have had a negative impact on the ability of researchers to increase their visibility worldwide, reducing the potential for peer esteem. It was recommended that such financial supports be re-introduced and maintained as a matter of urgency.

3. Greater institutional guidance and support for units to develop, implement and maintain active outreach strategies will enhance the development of peer esteem

indicators, whether through the hosting of high-impact international conferences and networks or through online showcasing of research activities.

4. All units should engage in the active development of long-term, mutually beneficial, international collaborations, particularly at European level. Opportunities for integration into large-scale research collaborative teams that could enhance external research funding, increase postgraduate activity and promote international conference participation should be actively pursued.

5. In a European context, European Research Council (ERC) awards are universally considered to be decisive indicators of research esteem, as well as securing considerable research autonomy through the provision of significant additional funding streams. The University should maintain and enhance supports for greater participation in this programme.

6. Despite the importance of conference attendance for networking and developing international visibility, there is a clear disconnect, in some cases, between delivery of frequent conference presentations and subsequent peer-reviews publications. Panels recommended that application procedures for conference support should be refined to ensure that staff link conference attendance to a planned peer-reviewed publication.

7. There needs to be greater alignment of personnel investment with current and potential areas of research strength within the institution. The age profile of many units reflects a large proportion of early-career researchers who have limited opportunities to develop peer-esteem indicators at an international level.

RAI 4 – Research-related activities

This indicator examined the research context of units as a whole, as distinct from the individual peer esteem examined in RAI 3, although there is necessarily an overlap between RAI 3 and RAI 4. Panels were asked to review the full gamut of research activity both within and beyond the unit. The following criteria were specifically mentioned in the guidelines: the provision of seminar series, research-focused public engagement exercises, specialist training provision, inter- and intra-institutional collaboration, research mentoring, outreach activities, support for scholarly institutions, evidence of research-led teaching at all levels, external engagement including enterprise collaboration and trans-disciplinary interaction, where appropriate.

The highest unit scores were achieved in RAI 4, with the overall scores from the Panels showing that a quarter of the units were rated 5, and a further 43% were rated 4 for this indicator, meaning that over two-thirds of the units are competitive globally on this parameter (appendix 3, figure 6). In general, the reports commented on the significantly increased research activities in this review period compared to the previous research assessment period, and on the vibrant research culture that currently exists in UCC. The wide variety of activities showcased include: hosting national & international conferences, summer schools, and visiting scholars; national & international collaborations (including grants applications and success); membership of scholarly boards, advisory groups, funding agencies and other policy boards; engagement with industry, the community and voluntary

organisations; community outreach; alongside the more usual academic activities such as peer review, conference presentations etc.. In the vast majority of cases the Panels noted the extensive range of these activities, particularly on the national stage, as well as those activities that are operating on a global scale.

The overlap between RAI 3 and RAI 4 mean that the recommendations discussed previously in RAI 3 are pertinent to RAI 4.

Some of the reports of the Panels which scored less well, while noting the range of activities presently undertaken, suggested consideration be given to the nature of these activities. Therefore, the main recommendation that can be applied at the unit level is the need to develop strategic oversight of the large number of activities presently being undertaken. There should be greater consideration of the research value of these activities, particularly on the international stage, as well as measurement of their societal value and research impact.

RAI 5 – Postgraduate research education

Postgraduate education is an important component of any research evaluation. Panels were asked to rate postgraduate education by a wide range of criteria, including: the total number of postgraduate students present in each unit; the number which are externally-funded; supervision and review processes; completion times, rates and mechanisms for monitoring these; postgraduate training opportunities; the involvement of postgraduates in the research activity and culture of the unit; the facilities available to the students to conduct their research; research mentoring and professional development. Group discussion involving Panel members with postgraduate students was an important part of each review.

The overall scores for this indicator show that 26% of units were rated 5, with a further 35% rated 4 (appendix 3, figure 8). In general, the reports highlight the provision of good quality postgraduate education in UCC, with significant improvements during the review period. Many Panels noted the improved support structures for postgraduate training during the review period, through the roll-out of the mandatory Structured PhD programme. The Panels recognised this as an important development that provides a robust mechanism for assessing and monitoring student performance, as well as providing a framework for postgraduate training and professional development. They noted it as an example of best practice, alongside recognition of the excellent quality of postgraduate supervision and research mentoring, and the professionalism and dedication of supervisors.

The Panels were impressed with the engagement and enthusiasm of the postgraduate students, in particular their contribution to research culture and outputs. However, while some units have access to world-class facilities, there are those for which facilities are not of the standard normally expected.

Generally, the number of students successfully completing postgraduate courses and the time taken are appropriate, although completion times were raised as a concern in some cases. The majority of panellists noted that student numbers were appropriate to the size and scale of the academic unit; however, in some cases, the weight of supervision falls onto a small number of very research-active staff.

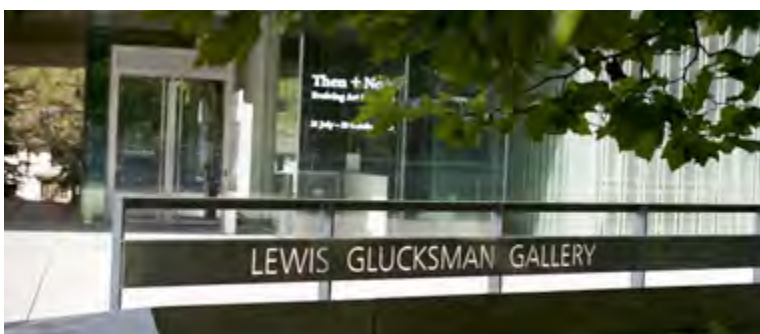
Some reports queried the structures in place for monitoring student progression and ensuring appropriate supervision. There were also comments about the facilities available to some students for their studies. Where there were concerns expressed in the reports, the following recommendations were common:

1. The benefits of more structured training, such as that promoted by the Structured PhD programme, should be embraced by all areas across the University, to optimise completion rates and career development opportunities for all PhD students;
2. Facilities available for students should be improved.

RAI 6 – Research income

Panels reviewed the collective research-related income of the unit within the context of the national research landscape relevant to researchers in the appropriate disciplines, including research-related consultancy, studentships and more traditional sources of research income.

The review period corresponded with the economic crisis and consequent significant erosion in the Irish funding landscape. Nevertheless, research income to the university grew over this period, with a very significant alteration in the funding profile as researchers increasingly sought non-exchequer income in order to compensate for the decrease in exchequer research funding. The majority of Panels were impressed with the level of grant income generated during the review period and the diversity of funding sources, particularly in light of the time available to staff for research and the state of the Irish economy. In such a context, the fact that 23% were rated 5 and 38% rated 4 (appendix 3, figure 10) would seem to confirm the view of many Panels that it is the presence of clear strategic vision that is leading to research funding success.



As in other areas cited above, in some of the cases where total grant capture was good, there was an over-reliance on a small number of staff for success; however, it was also noted by some Panels that this can be discipline-specific and depend on academic research interests.

However, even with these successes, the majority of Panels indicated that there is scope to further increase grant capture. The following recommendations featured in the majority of reports:

1. There is a need to diversify research funding sources and encourage more staff to seek funding. This should include both traditional and non-traditional sources, including industry. Those units with a strong national funding record should embrace European funding at all levels.
2. There should be a strategic approach to seeking research funding. The viability of potential collaborations nationally and internationally should be examined internally within UCC.
3. For units with a predominantly young staff profile or where there is scope to improve performance, enhanced mentoring and review of grant applications should be implemented.
4. The overhead policy in research units and the University needs to be carefully monitored and reviewed.

3.2 AREAS OF GOOD PRACTICE AND RECOMMENDATIONS FOR FUTURE DEVELOPMENT

Many aspects of research performance were praised by reviewers, both at unit and Panel level, presenting an overall picture of improvements in research culture since the last evaluation exercise. Even so, an overarching theme of the reports was that these achievements were all the more remarkable given the challenging financial environment over the review period. It is hardly surprising, then, that reviewers' recommendations for future development were generally much more detailed than those relating to good practice, even though there was often more expansive reference to the latter in overall conclusions and/or commendations. Furthermore, many recommendations relate very specifically to disciplinary context and must be given closer consideration by individual units in drawing up quality improvement plans. Those with wider implications have been drawn together below, with the exception of those relating to the conduct of the RQR exercise, which have been addressed in a subsequent section.

Evidence of good practice

1. Research-active staff: One of the most positive elements of the review was the high degree of praise for academic staff throughout the University. There was repeated reference to the impressive levels of research performance, cooperation and collegiality, above all in the context of extreme staffing and resource limitations over the past seven years, caused by the moratorium on appointments and promotion, and the reduction of budget allocation for research activities.

2. Research Leadership: Panels were particularly impressed by the presence and influence across the University of research high-fliers, particularly where they were positioned to provide leadership and a strong strategic vision. Research performance in a significant number of units was considered to be highly dependent on these leading researchers, with 13 out of 15 Panels making explicit reference to these pockets of excellence.

3. Early Career Researchers: The University as a whole was commended for the performance of ECRs across different units, indicating that the support mechanisms provided for this category of staff are robust, if not uniformly applied. In addition to central schemes, it was noted that the strongest ECR performers had generally benefitted from mentoring schemes at unit or School level.

4. Postgraduate Research Culture: Perhaps surprisingly, given the statistical data drawn from scores, all Panels reported one of the strongest areas of improvement to be the area of postgraduate education. The University was complimented for the attention paid to postgraduate student needs, and the quality of postgraduate supervision and mentoring was highlighted repeatedly. The postgraduate community has increased substantially over the past seven years, and benefits from an excellent framework for PhD supervision and appropriate generic and specialist skills training courses. Panels in STEM and Health reported that PGR culture was particularly strong where students are able to benefit from postdoctoral mentors, pointing to the importance of maintaining a good postdoctoral to postgraduate ratio. In other Panel reports, more weight was placed on evidence of the integration of the postgraduate community into School and College research culture, and the dynamism of PGR activities.

5. Research Strategy: Many Panels commented on evidence of good strategic research vision, in particular where units had focused on identifying and developing particular specialist areas of research excellence that would make them stand out in the international research landscape, and also where opportunities for cross-departmental and cross-School collaboration had resulted in multi-disciplinary research with transformative potential. The strongest performers were units that had explicit medium to long-term research plans, and Panels placed emphasis on the benefits for all of developing five-year plans to maximise potential and ensure sustainability. There was evidence across the university of an improved potential for grant capture, with increasing success rates in national and European competitions (in particular FP7, but also an emerging track record in Horizon 2020).

6. Research Infrastructure: Panels noted the impact of developments in the Research Office, in particular in the support and guidance it provided for navigation of the funding landscape and for the leadership it had shown on aspects of RQR, together with the Steering Committee. However, the strongest performances were evident where units or schools benefited from local project management and administration, as well as strong technical support, as was particularly the case in the research centres.

7. Research Activities and Impact: One of the most commended areas of research culture was the development and maintenance of vibrant seminar programmes, conferences and other research events by units and schools. Panels also reported on strong evidence of healthy collaboration with strategic partners at local, national and international level. UCC research was found to be delivering clear social and cultural impact and socio-economic benefits.

Recommendations for future development

Panel recommendations for future development highlighted three main areas:

- Staffing
- Research Infrastructure
- Research Strategy

Staffing

1. Staff Recruitment and Retention: As noted above, a common theme across the review was the remarkable efforts of staff to deliver research against a background of reducing staff FTEs, increasing student numbers and intensification of individual teaching and administrative duties. Unsurprisingly, then, the most urgent recommendations related to ensuring more sustainable levels of staffing: by re-visiting the current recruitment strategy in order to make more senior level appointments to provide and sustain research leadership; by revising the process for career advancement, with better structures for annual performance and development assessment, and greater opportunities for promotion; by addressing inequities in remuneration against academic performance. The period under review was considered to have seen too many short-term contracts, which does not facilitate long-term planning, and makes it difficult to attract and retain leading researchers.

2. Staff Development and Mentoring: In addition, many Panels recommended formalisation of staff development and mentoring systems, in order to encourage and guide staff in developing their own research strategies, and to engender a culture of high expectations and attainment. In particular, staff would benefit from greater support and guidance in presenting material for research quality submissions through online use of IRIS and the selection of publications.

3. Postgraduate Training and Education: Even though the majority of Panel reports painted a picture of international excellence in PGR culture, there were some specific recommendations to further improve UCC's record in this area. It was felt that PhD completion times could be reduced through formalisation of mechanisms for postgraduate progression across the university, reconsideration of internal processes for approving international PhD students, and that more could be done to integrate off-site students into the life and research activity of Schools and Colleges. As far as PGR training and development is concerned, Panel reviewers in STEM and Health suggested the benefits of extending research-led teaching at PG level in order to develop graduate student research clusters, and that there was a need to review the role and timing of teaching responsibilities within PGR development. More comprehensive ethics training was also recommended.

Research Infrastructure

1. Notwithstanding the strong evidence of improvement in research supports at University level, including grant seeking, public relations and IT services, almost all Panels indicated that there was insufficient research support at local level and noted the benefits of more tailored strategies for different units. In most cases, the ideal would be the appointment of full-time research administrators to facilitate funding bids, coordinate existing projects, support conference organisation and coordinate IT needs. It would also be beneficial to improve communication about available research supports and to strengthen centralised systems for recording and regularising grant activity. STEM Panels indicated a need to review overhead charges on industrial grants and procedures for their allocation. More generally, it was recommended that the process for funding sabbatical leave would benefit from review in order to ensure equity in access.

2. There were numerous issues raised concerning research space. Many departments do not have sufficient space for their activities, and in some areas departments working in similar areas are not contiguous. Numerous reviewers identified the need for investment to ensure that all units have sufficient, state-of-the-art spaces to develop research potential, and to consolidate units and colleges in shared sites in order to facilitate cooperation and collaboration. Disability access was also identified an issue, as was the urgent need for more dedicated space for research staff and students. In one Panel report, there was a plea that building opening hours might be extended to support graduate and postdoctoral research needs.

3. Many Panel reports indicated that computing infrastructure and IT and specialist equipment support would benefit from extensive improvements in order to carry out research at world-class level. Resources should also be allocated for the development of a more effective online presence for UCC research. Panels viewed that the library is currently under-funded, and library budgets for all units should be enhanced and maintained into the future.

Research Strategy

1. All reviewers emphasised the importance of designing and communicating medium to long-term research plans between University, Colleges, Schools and staff members to ensure the collective ownership and sustainable focus of research strategy.

2. Most Panels identified a need for greater supports for inter- and multi-disciplinary research, encouraging staff to work across schools and colleges. Panels felt that there was scope for further revision of structures in order to enhance cooperation and ensure maximum effectiveness, and Panels within STEM advised greater monitoring of the relationship between departments and research centres to ensure more equitable resource allocation and support. Research teams are to be encouraged to engage with wider and broader networks internationally in order to ensure greater international exposure and visibility of UCC research.

3. Focused efforts should be made to diversify funding sources, by collaborating in more EU projects in order to build reputation and enhance visibility. Reviewers recommended greater focus on ERC applications, which they identified as the foremost indicators of international research esteem. There were numerous references in reports to the urgency of reviewing the mechanisms by which the University engages with industry and the corporate sector, in order to increase revenue.

4. More consideration should be given to how to rate societal impact. In particular, the University needs to raise awareness of Impact for Ireland, and provide training for all staff around the meaning, means and value of impact. There is a need to enhance existing good practice in knowledge-exchange activities by articulating links to research and/or ensuring there is a strong research underpinning.

5. Some Panels recommended reconsideration of the current inclusive approach to research and scholarly activity, in order to develop a culture that is fully capable of distinguishing high quality research. The University would also be advised to review the relationship between research and teaching, and to increase the weight of research activities in the workload allocation model.

3.3 RECOMMENDATIONS ON RQR PROCESS AND IMPLEMENTATION

Overview

Overall, Panels commended UCC's strategic leadership in commissioning the RQR exercise, endorsing its value in the evaluation of research performance across the University according to international standards and in fostering a culture of research excellence. There was strong recognition of the achievements made since the last assessment, which were considered to be all the more laudable in light of the severe resource constraints experienced during the period under review.

As well as recognising the institution's vision in commissioning this review, Panels praised the efforts made by all staff to provide them with sufficient information to perform their role with due care and confidence. Panels welcomed the professional and courteous manner in which the RQR was conducted throughout, and often commented in particular on the effectiveness of the QPU and the Steering Committee. Throughout the reports, Panels provided constructive feedback on the RQR process and its implementation, which has been summarised below:

1. Scoring: A number of Panels expressed reservations about the current scoring system, in particular the requirement to use only single integer scores.¹ In general Panels advised that greater attention should be paid to the narrative of the reports. Furthermore, it was recommended that the remote evaluation system for publications should be expanded to include justification for scores awarded.

2. RAIs 1-3: units and staff would benefit from more support and guidance in the selection of publications and in the use of IRIS to record evidence of research activity and esteem, in order to ensure that submissions are in line with international standards of excellence in research performance and visibility. Feedback from the Panels indicated that IRIS was used inconsistently, making the review process unnecessarily arduous in some cases. Higher standards of recording this information might be achieved with the introduction of annual reporting, as well as closer monitoring through the staff development review process. It was suggested that the University should also investigate further use of bibliometric indices, but always in conjunction with qualitative analysis.

3. RAIs 4-6: Panels commented on the lack of uniformity in the provision of evidence for activity in these areas, indicating the need for systematic improvements in recording, collecting and archiving relevant research data for future exercises. The international visibility of research activities for RA14 would be enhanced by more strategic and consistent use of online platforms, whereas for RAIs 5-6 it was suggested that a template with clear demarcation of the types of funding and postgraduate student profiles could be devised for ease of reference.

4. Administration: Many Panels felt that a larger support team was required at UCC to assist their work both before and during the review visits. They also recommended reconsideration of the timetable for visits, preferring a reduction in the time allocated for presentations from senior managers in order to be able to spend more time with unit staff. Some Panels called for the inclusion of Library visits, in order to create a more accurate overall picture of key resource availability.

3.4 UNIVERSITY LEVEL RECOMMENDATIONS AND IMPLICATIONS

This section outlines the most significant issues and Panel recommendations directed explicitly towards the University within the reports, identified through their weight of emphasis and frequency. The majority are resource-based matters and are reflective of the sustained financial and staffing constraints under which the University has operated for a number of years. Although these issues are reflected in detail in the preceding sections, their implications are highlighted here as key themes for strategic discussion and action.

Investment in Staffing: Sustainability and Capacity-Building

Whilst overall the quality of research at UCC was judged to have improved, there is a strong and consistent emphasis from Panels that current significant staffing issues pose challenges for the sustainability and capacity-building of the University's research activities. In particular, the University will need to give attention to:

- Strategic investment in staffing to provide the necessary leadership to ensure the vibrancy and international visibility and impact of UCC research;

¹In 2009 decimal scores were used in places, though this was at variance with the guidelines for that exercise; this inconsistency adversely affected comparability with the 2009 review in some cases.

- Achieving a sustainable balance between the teaching, research and administrative duties for staff;
- Optimising the administrative structures necessary for research support.

Academic Workload

Panels highlighted the considerable impact of the staffing constraints on the balance between teaching, administration and research activities in academic workload, indicating that the current balance was not sustainable for an institution with international research ambitions. It will be important for the University to ensure that the workload allocation model, which was commended, fulfils its potential along with considering measures that might produce more balanced approaches to teaching/research activities in consonance with those at comparator institutions.

Resources & Infrastructure

The perceived need for investment in infrastructure and appropriate resources, including provision of, or replacement of, old equipment, to support research activity recurred across reports. In several instances, Panels indicated that resource requirements are being met only at a minimal level. Overall the University needs to ensure that the available infrastructure is in place to ensure that research teams have up to date facilities and resources to sustain internationally competitive research activities. It will need to ensure that the strong recommendations for immediate action in a number of places are addressed.

Research Strategy

Many Panels commented on positive developments in research strategy since the previous RQR. In a number of instances, the implementation and impact of effective research strategies within some academic units was commented on positively. Nevertheless, there could be further progress in developing a stronger and wider ownership of research strategy across the University to foster research for sustained success. In this regard, the University will need to ensure that:

- Research strategy that connects University, College, School and disciplinary areas should be sufficiently transparent to enable staff locally to think strategically about their research;
- Mechanisms which support the delivery of the research strategy, including: academic workloads; sabbaticals; budgeting; decisions about the balance between research and teaching activities, and structural opportunities for enhanced collaboration are implemented consistently to support excellence in research activities;
- Focus and effort is invested in developing internal awareness and shared understanding of the significance of research impact, along with the means to communicate research impact to a range of audiences in local, national and international contexts.

Research Quality Review Process

UCC has led the Irish higher education sector in its early adoption and implementation of a research quality review method, and has also achieved recognition for this initiative on the basis of the wide involvement of international peer reviewers in this and the preceding cycle. The expert-led model of assessment, based on international peer review supported by appropriate discipline-specific research metrics, has allowed strengths and recommendations for change to be identified by Panels. As the University develops the review method for the future, it will be important to ensure that:

- The process for addressing and following up on the recommendations of Panels is strengthened so that the stated aims and objectives of the exercise are realised fully;
- The evolution of the review method continues to be informed by developments in research quality review internationally, including issues of research impact, the appropriate use of metrics, and peer review, taking disciplinary norms into account;
- The required resources to support future RQR exercises effectively are established, including finance, administrative supports and information systems for the provision of data.

4. Next Steps

The University should note the strong and repeated positive statements on the part of the Panels that were positive about the research conducted in UCC, and should likewise acknowledge the challenges that have been observed. These challenges impact on the external perception of the institution's work, as well as the pragmatic production of research that the State contracts UCC to perform, and therefore merit recognition and action, in the spirit of developmental review.

Following internal discussion at University and College level, the next steps will involve the development and coordination of quality improvement activities across the University. These activities will seek to build on strengths identified as well as areas identified for further development. Activities will include:

- College Quality Improvement Plans to outline planned actions for Schools;
- Priorities for development and enhancement of the Research Quality Review process;
- Research strategy planning and development priorities for supporting research activities;
- Strategic planning activities at University level inclusive of the Annual University Plan (2016/17) and the formulation of the University Strategy 2017-22.

The Quality Promotion Committee will maintain oversight of the overall progress of quality improvement activities to support the continued development of research quality and to promote coherence in the University's response to the Research Quality Review 2015.

Appendix 1: RQR Analysis Group

At its meeting of 30 May 2016 the Quality Promotion Committee decided to establish a working group, drawn from the memberships of Academic Council Research & Innovation Committee (ACRIC) and QPC, to develop an analysis of the key recommendations documented in the Research Quality Review Reports, highlighting those that are consistent across all reports. The focus of the analysis will be on the developmental opportunities and institutional learning possible from the peer review exercise.

Scope of activities

- Produce a high level institutional analysis which synthesises key themes emerging across all reports, inclusive of:
 - good practice and areas for development;
 - strategic messages for the University documented within the reports;
 - developments since the previous Research Quality Review in 2009.
- From analysis, identify key issues for further consideration in the development of future RQR exercises informed by international good practice and RQR at UCC.

During the course of the activities outlined above, the Group will draw on relevant expertise to inform its work, including: members of the former RQR Steering Committee, VP Research, Research Office, Heads of Colleges. The work of the group will be supported by the Quality Promotion Unit.

The analysis, along with the final RQR Reports, will be submitted to Quality Promotion Committee, Academic Council and Governing Body.

Group members

Dr Helena Buffery,
Department of Spanish, Portuguese and Latin American Studies (QPC)
Professor Paul Hegarty,
Department of French (Chair of ACRIC)
Dr Simon Lawrence,
Department of Chemistry (ACRIC)
Ms Elizabeth Noonan,
Director, Quality Promotion Unit (QPU/QPC)
Ms Deirdre O'Brien,
Administrative Officer, Quality Promotion Unit (QPU)
Dr David O'Connell,
Director, UCC Research Support Services (ACRIC)

Appendix 2: RQR Process

Membership of the RQR Steering Committee

Professor Graham Allen,
School of English (ACRIC)
Professor Drummond Bone,
Master, Balliol College, Oxford (external member)
Ms Fiona Crozier,
Director of QPU (QPC), member of the committee until July 2015
Professor Alan Dobson,
Environmental Research Institute (ACRIC)
Professor Caroline Fennell (Chair),
Registrar (QPC), member of the committee from September 2015
Professor Paul Giller (Chair),
Registrar (QPC), member of the committee until September 2015
Professor Alan Kelly,
Interim Director of QPU (QPC), member of the committee from July 2015
Professor Anita Maguire,
Vice President for Research & Innovation (ACRIC)
Dr David O'Connell,
Director of Research Support Services (ACRIC)
Professor Patrick O'Donovan,
Department of French (ACRIC)
Dr Suzanne Timmons,
Centre for Gerontology (QPC)
Professor Douwe van Sinderen,
School of Microbiology (QPC)

A consultative meeting was held with members of the Steering Committee and David Price, a former manager of the Research Assessment Exercise at the Higher Education Funding Council, England in July 2013. Following on from such consultations and with input from the UCC academic community, the RQR SC developed the guidelines and detailed review process adopted by UCC.

The guidelines were closely informed by the policy paper on the RQR approved by the Academic Council in December 2012, where the scope and intended organisation of the review were established in the light of earlier consultations with the Colleges. These guidelines were expanded and finalised by the RQR Steering Committee in April 2014, approved by the Quality Promotion Committee and Governing Body, and then communicated to all staff. The review period was 1 January 2008 to 31 December 2014.

Guidelines

Staff were categorised as either Category A or Category B. Staff who were employed on a permanent or fixed-term basis were categorised as Category A. All Category A staff were included in the review. Category B staff included staff that were retired or who left UCC during the period of the review. Category B staff were included in the review at the discretion of the head of unit. All categories of staff were treated in the same manner for the purposes of the scoring system.

Units were grouped according to discipline within a total of 15 Panels. Each Panel was headed by a Chair and each unit therein was headed by a Disciplinary Vice Chair (DVC). Remote reviewers were recruited to review and score publications remotely. Two remote reviewers were recruited for every ten members of staff. Publications from individual staff members were reviewed by two separate remote reviewers and any discrepancies in scoring were adjudicated by the relevant DVC. A procedure for individual staff circumstances was put in place to ensure that particular special circumstances, such as periods of sick leave or maternity leave, were captured and taken into account by the reviewers. Allowance was also made in respect of early-career researchers not in academic roles for the whole of the review period.

Research Activity Indicators (RAI) were developed to enable a unit to effectively capture their research output and to form the basis of the review. RAI 1-3 were assessed at an individual level; RAI 4-6 were assessed at unit level. The six RAIs were weighted as follows in the final overall evaluation of each unit: RAI 1 selected published output, 25%; RAI 2 total published output for the review period, 15%; RAI 3 peer esteem, 15%. RAI 4 research-related activities, 15%; RAI 5 post-graduate research education, 15%; RAI 6 research income, 15%.

IMPLEMENTATION

Reviewers

An external expert for each unit was requested to nominate a long list of potential reviewers. Chairs and Disciplinary Vice Chairs were selected from these sources. Remote reviewers were selected from external expert lists, unit lists and QPU sources. In total, 241 remote reviewers were recruited along with 15 Chairs and 70 Disciplinary Vice Chairs, drawn from top-ranking universities and institutes in Europe, Asia and the USA.

Briefing of Chairs

All Chairs were invited to UCC for briefing meetings in October and November 2014 led by the SC with contextual presentations from the Registrar and the Vice-President for Research & Innovation; they also met with the Heads of the relevant Colleges. The objectives of the exercise and details of the process were discussed. The aim of the briefing was to ensure that Chairs work consistently across Panels while also within disciplinary norms.



Submissions

Units were facilitated and trained to upload their staff publications and submissions to a dedicated framework based on Google Drive. Information was provided from central sources on postgraduate figures, staffing numbers and research funding for the period of the review. Once the submissions had been uploaded using the detailed templates provided, reviewers were given access to the relevant folders to access and view the publications and unit submissions.

Census

A staff census was undertaken in order to ensure that all staff were captured (including the number of Category A and Category B staff) and that the number of remote reviewers assigned to the unit was adequate. The census also recorded staff working in more than one unit.

Scoring

The SC considered different methods for capturing the scores of the remote reviewers and established a system which allowed for remote reviewers to input scores again using a dedicated framework via Google Forms. An overall mean score for the unit was automatically calculated for RAI 1-3. The scores of staff attached to more than one unit were considered and calculated into the mean scores equally under all relevant units. Score sheets were sent to the DVCs who ensured that there were no obvious scoring discrepancies among remote reviewers and also added in their own scores for RAI 4-6. This document was sent to the Chair in advance of the site visit. Both the submission and the scoring frameworks were relatively simple in design and were economical to develop. Each of these two frameworks proved to be robust and the design implemented fully met the complex needs of the review, encompassing close to 70 unit submissions and involving more than 300 reviewers, Panel Chairs and Disciplinary Vice Chairs.

An Evaluation Procedure was developed by the SC outlining the mechanisms to be used to come to a final score.



Site Visits

Two DVCs went to each unit to meet with staff and postgraduate research students and to view facilities. The purpose of the site visits was to ensure that Panels have a clear understanding of the context in which the unit is situated and for the unit to highlight their own strengths, challenges and opportunities. The whole Panel met with a range of university officers, including the relevant Heads of College. The whole Panel also made exit presentations to representatives of all of the units under review.

**Appendix 3:
RQR Scores – 2009 and 2015**

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Figure 6	RAI 4: 2015 Scores
Figure 7	RAI 4: Change in scores since 2009
Figure 8	RAI 5: 2015 scores
Figure 9	RAI 5: Change in scores since 2009
Figure 10	RAI 6: 2015 scores
Figure 11	RAI 6: Change in scores since 2009

To note

- As RAI 1 (selected published output) and RAI 2 (total published output) were assessed differently in 2009 and 2015 they cannot be directly compared.
- Research Environment was assessed in 2009 but not included in the 2015 RQR.
- 69 units were assessed and scored in the 2015 RQR. The pie charts which reference the 2015 scores (figures 2, 3, 4, 6, 8, 10) contain the results of all 69 units.
- A number of units were not included in the pie charts which look at the increase/decrease in scores between the 2009 RQR and the 2015 RQR (figures 5, 7, 9, 11). Only units that were directly comparable were included in the analysis.
 - Half scores: units that scored half scores in particular RAIs in 2009 were not included in the analysis of that RAI.
 - New units/old units: some units were scored in 2009 but not included in the 2015 RQR. There were also new units included in the 2015 review that were not assessed in 2009.
 - No score: some units were not scored under particular RAIs in 2009.

Some highlights

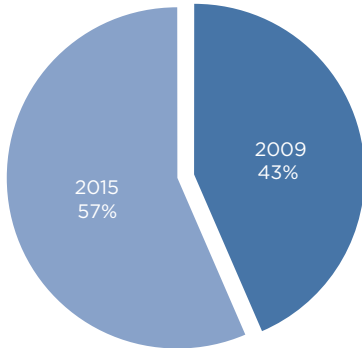
- The largest increase in score occurred in RAI 5 (postgraduate research education).
- The largest decrease in score occurred in RAI 6 (research income) where 26% of scores decreased between 2009 and 2015, highlighting the difficult financial environment in the intervening period.
- The most static research indicator was RAI 3 (peer esteem), with 45% of units showing no change in score since 2009.
- The final scores show a marked increase in top scores, with 57% of units obtaining a score of 4 or greater in 2015 compared to 43% in 2009.



Final Scores

Figure 1 - Final scores: % of units achieving high scores 2009 and 2015

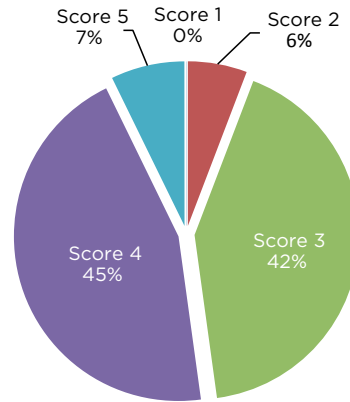
The pie chart shows the percentage of high scoring units, in 2009 and 2015. This includes all units that scored 4 or more.



RAI 3: Peer Esteem

Figure 4 below shows the distribution of scores for RAI 3 (peer esteem) in the 2015 RQR.

Figure 4 - 2015 Scores (RAI 3)



RAI 1 - Selected Published Output

Figure 2 below shows the distribution of scores for RAI 1 (selected published output) in the 2015 RQR.

Figure 2 - 2015 Scores (RAI 1)

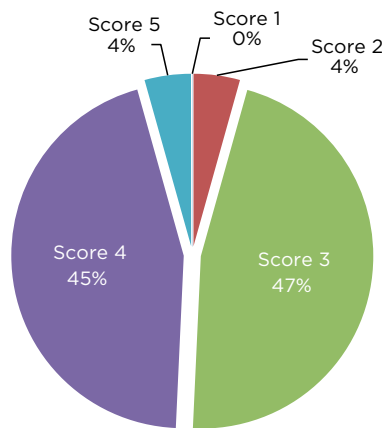
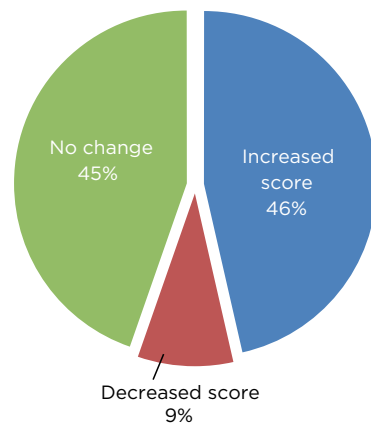


Figure 5 below shows the level of increase or decrease in scores since the 2009 RQR. Fifty-six units were included in this analysis.

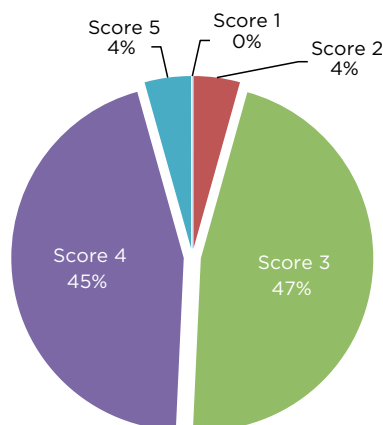
Figure 5 - Change in scores since 2009 (RAI 3)



RAI 2 - Total Published Output

Figure 3 below shows the distribution of scores for RAI 2 (total published output) in the 2015 RQR.

Figure 3 - 2015 scores (RAI 2)



RAI 4 - Research-related Activities

Figure 6 below shows the distribution of scores for RAI 4 (research-related activities) in the 2015 RQR.

Figure 6 - 2015 Scores (RAI 4)

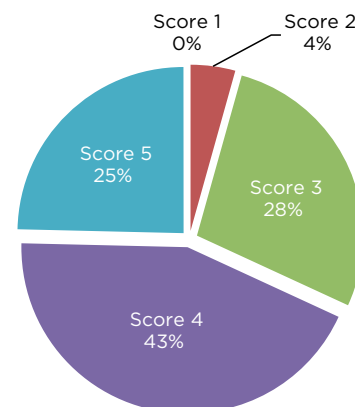
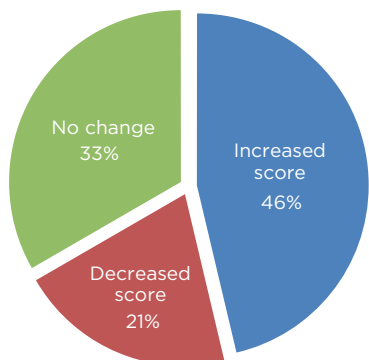


Figure 7 below shows the level of increase or decrease in scores since the 2009 RQR. Fifty-four units were included in this analysis.

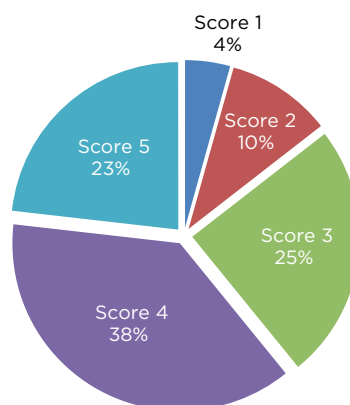
Figure 7 - Change in scores since 2009 (RAI 4)



RAI 6 - Research Income

Figure 10 below shows the distribution of scores for RAI 6 (research income) in the 2015 RQR.

Figure 10 - 2015 Scores (RAI 6)



RAI 5 - Postgraduate Research Education

Figure 8 below shows the distribution of scores for RAI 5 (postgraduate research education) in the 2015 RQR.

Figure 8 - 2015 Scores (RAI 5)

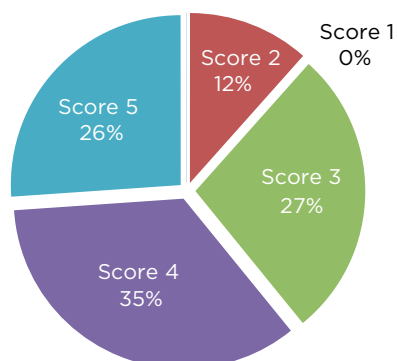


Figure 11 below shows the level of increase or decrease in scores since the 2009 RQR. Fifty-three units were included in this analysis.

Figure 11 - Change in scores since 2009 (RAI 6)

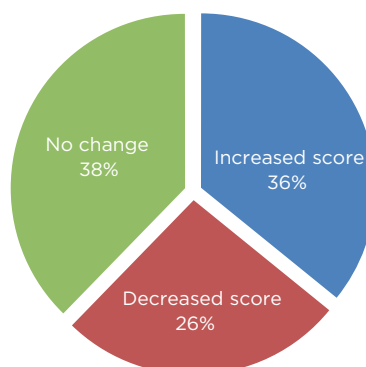
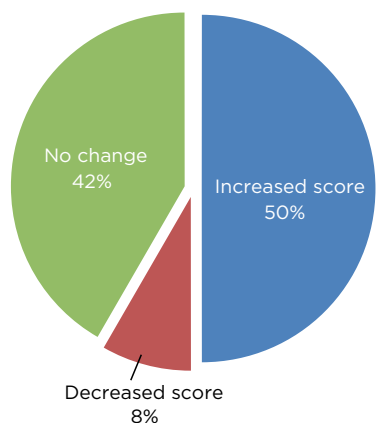


Figure 9 below shows the level of increase or decrease in scores since the 2009 RQR. Forty-eight units were included in this analysis.

Figure 9 - Change in scores since 2009 (RAI 5)





Section B: Outline of RQR 2015 Process

The following information outlining the structure of the review process is abridged from the RQR Guidelines 2014.

Review Structure

1. Fifteen Peer Review Panels will be appointed, based on disciplinary clusters. Peer review teams may vary in size according to the size and complexity of the cluster of academic units and disciplines within the cluster.
2. Peer Review Panels will receive material in advance. The majority of reviewers will work remotely. Chairs will visit the University twice: before the exercise for briefing and to ensure consistency of approach and, together with the disciplinary vice chairs, after the remote review of submissions has taken place.
3. Site visits to include:
 - First site visit (by Chairs)
 - Information and briefing meetings between Panel Chairs and members of the Steering Committee.
 - Briefings with Colleges and RICUs on prevailing research and graduate education conditions.
 - Second site visit (by Chairs and Disciplinary Vice Chairs)
 - Presentation from academic units on research activity.
 - Meetings with staff, researchers and postgraduate research students.
 - Meetings with relevant Officers of the University.
 - Visit to facilities of units.
 - Consideration of the reports of the remote reviewers.
 - Agreement on results.
 - Drafting of report according to guidelines and criteria for assessment.

Criteria for Assessment

Research performance will be evaluated, relative to international disciplinary norms, under the following headings:

- a. Selected published output
- b. Total published output
- c. Peer esteem
- d. Research-related activities
- e. Postgraduate research environment
- f. Research income

Definitions

For the purposes of the review the following definitions apply:

1. Assessment Period: the period from 1 January 2008 to 31 December 2014. The research described in submissions from academic units and research centres/institutes, including data about research funding and the textual commentary, must relate to this period.
2. Census Date: the date determining the affiliation of academic and research staff to a particular academic unit/research centre/institute. All staff should be submitted by the academic unit/research centre/institute that employs them on this date, regardless of previous or forthcoming changes in their employment status. Note that staff can be associated with an academic unit and a RICU, but will only submit and be reviewed once and the outputs incorporated into the academic unit and the RICU. A staff census will be undertaken during the present academic year on 31 May 2014 to enable planning. An update to the census will be undertaken on 31 October 2014, to account for all staff hired after May 2014 and who will be in post at the time of the review, to provide the final list for the review.

3. Publication Period: the period during which research outputs must be placed in the public domain (or in the case of confidential outputs, lodged with the sponsor) if they are to qualify for inclusion in the assessment. The publication period runs from 1 January 2008 to 31 December 2014.

4. Research: this definition was approved at the Academic Council meeting of 7 March 2008 and remains unchanged:

'Research' for the purpose of the review is to be understood as original investigation undertaken in order to gain knowledge and understanding. It includes work of direct relevance to the needs of commerce, industry, and to the public and voluntary sectors; scholarship*; the invention and generation of ideas, images, performances, artefacts including design, where these lead to new or substantially improved insights; and the use of existing knowledge in experimental development to produce new or substantially improved materials, devices, products and processes, including design and construction. It excludes routine testing and routine analysis of materials, components and processes such as for the maintenance of national standards, as distinct from the development of new analytical techniques. It also excludes the development of teaching materials that do not embody original research.

*Scholarship is defined as the creation, development and maintenance of the intellectual infrastructure of subjects and disciplines, in forms such as dictionaries, scholarly editions, catalogues and contributions to major research databases.

5. Consultancy: income and research outputs arising from consultancy contracts should normally be excluded, since consultancy is usually concerned with applying existing knowledge. However, they may be included if the work

undertaken or published as a result meets the definition of research, irrespective of the nature of the contract or invoicing arrangement.

6. Pedagogical Research: is included in the scope of the RQR and includes research which enhances the theoretical and/or conceptual understanding of:

- teaching and learning processes in higher education
- teacher and learner experiences in higher education
- the environment or contexts in which teaching and learning in higher education take place
- teaching and learning outcomes in higher education
- the relationships between these processes, outcomes and contexts

7. Applied and Practice-Based Research: is included in the scope of the RQR and involves a process of systematic investigation within a specific context in order to solve an identified problem in that context. It aims to create new or improved systems (of thought or production), products, processes, materials, devices, or services which have an impact on society through enhanced wealth-creation and quality of life.

Some characteristics of applied research and practice-based research are that:

- a) They are informed by an intellectual infrastructure of scholarly research in the field.
- b) They apply and/or transfer enhanced knowledge, methods, tools and resources from pure research and developmental research.
- c) They contribute to scholarship in the field through systematic dissemination of the results.
- d) The outcomes may be specific to the situation in which the research has been applied, although the methods/tools evolved are often transferable.





8. Creative Research: encompasses creative work and its outcomes in a range of subject areas, including creative writing, music, drama, dance, theatre, performance, live art, and film. This research may lead to published materials in a variety of forms in any of these subject areas. Such research is also diverse in the range of artistic practices on which it may draw and may extend to any cultural, geographical and historical context. It may include production or performance of creative material which itself results from a process of original creative enquiry. This work may also be collaborative in nature.

9. Research Submission: this is the totality of what will be submitted to review Panels and incorporates contextual information (the research description for each unit which sets out the extent and boundaries of the research carried out in that area), the research statement (see below) and the information required by the six Research Activity Indicators (see below).

10. Research Statement: the research statement will provide contextual information and an overview of the research activity in each unit of assessment during the review period in addition to a critical assessment of progress made since the last RQR, including a response to any recommendations made. A template and further information on submission will be provided. It will be a maximum of 5,000 words (see below for further detail).

11. Research Activity Indicators (RAIs): there are six research activity indicators. The information provided under each of the six headings, together with the research statement and the research description, constitutes the research submission.

12. Unit of Assessment: these are the units reviewed by each Panel as defined in Appendix A. It includes each of the academic units and each of the associated Research Institutes, Centres or units. NB: Not all of the associated Research Institutes, Centres or units will be reviewed separately.

Assessment Process

1. This is an expert peer review exercise. Panel members will exercise their knowledge, judgement and expertise to reach a collective view on the quality profile of research described in each submission, that is, the proportion of work in each submission that is judged to reach each of five quality levels (see below). The definition of each level relies on a conception of quality (of leading international standard) which is the absolute standard of quality in each unit of assessment. Each submission will be assessed against absolute standards and will not be ranked against other submissions.

2. External experts nominated by the academic units will be asked to suggest who, from among their list of Panel nominations, might be suitable for the role of Chair. The final decision and approval of chairs will be made by the Steering Committee.

3. Up to five Disciplinary Vice-Chairs will be appointed, with the assistance of the Chair, for each Panel. They will be responsible for the co-ordination of the electronic evaluation of each disciplinary unit by the remote reviewers. They will attend the site visit post-evaluation.

4. Chairs and Disciplinary Vice-Chairs will be responsible for ensuring consistency across and within Panels and the application of international standards in the exercise.

5. Panel reviewers will initially evaluate RAIs 1-3 and elements of RAI 4 at an individual level. They will subsequently review overall performance of the academic unit or RICU drawing on the input of each researcher, recognising that researchers may appear in more than one.

6. First Site Visit. Panel Chairs will visit UCC for one day for briefing purposes and to ensure that the Panels work consistently as far as possible.

7. Second Site Visit. Following the remote review of the submissions, the Chairs and Disciplinary Vice-Chairs of the Panels will visit UCC to conduct site visits. They will meet with staff and officers of the unit and University and will visit the research and other facilities of each unit under review in order to form an assessment of the research environment. At the second site visit, the Chairs and Disciplinary Vice-Chairs will consider the reports from the remote reviewers in order to initiate discussion on each individual submission. A preliminary profile of the quality of outputs will be considered. A profile of the quality of research outputs and peer esteem will be compiled, along with decisions made as to scores for the research-related activities, postgraduate training, the research funding and research environment, taking on board the deliberations of the Panel at large.

8. An overall research evaluation (ORE) will be awarded by the Panel to each unit. This will be achieved through a process of consideration of all scores in the six RAIs along with consideration by the Panel of the Research Statement and other contextual information. The results for the six RAIs will also be produced for each unit, providing anonymous percentiles for RAIs 1, 2 and 3, along with results for the unit in RAIs 4, 5 and 6. The Panel will finally confirm that, in its expert judgement, the overall recommended score is an accurate and appropriate reflection of the research activity in each submission, and that its assessment has taken account of all components of the submission. Further guidance will be provided to Chairs of Panels at the first site visit.

9. Descriptive and evaluative statements. Panels will provide a descriptive statement of their view of the overall quality of research activity for each academic unit. Panels are also asked, within this statement, to comment on the totality of research activity and performance in the context of the research environment in which the unit is working and to make recommendations for improvement.

Research Excellence

Panels recognise the diverse range of disciplines represented by the units of assessment assigned to them. Set out below are the broad parameters for the assessment of the quality of research for each of the six Research Activity Indicators within which individual Panels may exercise a degree of variation. The quality levels refer to quality standards of scholarship that are the norm within the international academic community.

- Level 5** Quality that is of leading international standard.
The research work or activity will be excellent, displaying a very high level of originality, significance to the discipline and rigour; it will be innovative and potentially agenda-setting in research and/or policy fields
- Level 4** Quality that is of very good standard in terms of originality, significance and rigour comparable with such work internationally. The research work or activity has had or is likely to have a significant impact on research and/or policy agendas
- Level 3** Quality that demonstrates significance to the discipline and rigour to a good standard. The research work has had or is likely to have a recognised impact on research and/or policy agendas
- Level 2** Quality that demonstrates significance to the discipline and rigour to a fair standard. The research work or activity has only had or is likely to have a marginal impact upon existing paradigms and agendas within the discipline.
- Level 1** Quality that falls below the adequate standard of recognised work within the discipline. The research work or activity is poor and has had no impact nor is it likely to have an impact upon existing paradigms and agendas within the discipline.





Because of the differences which exist between the six RAIs, appropriate criteria will be employed in each one:

RAI 1 will be evaluated against the criteria of originality, significance and rigour.

RAI 2 and 3 will be evaluated against the criteria of extent, diversity and quality.

RAI 4 and 5 will be evaluated against the criteria of international disciplinary norms.

RAI 6 will be evaluated against the criteria of funding levels for the specific unit and cognate disciplines available to researchers in Ireland.

Definitions of Research Activity Indicators (RAI)

Research Activity Indicator 1 (RAI 1): Selected Published Output

Panels will be required to rate each of the five selected research outputs for each Category A and B researcher. Each publication will be rated by two Reviewers. The overall quality profile will be finalised by the Panel.

Research Activity Indicator 2 (RAI 2): Total Published Output

Two Panel members will be required to allocate an individual Category A or Category B researcher's total research output in the period, identified on IRIS/CORA to one of five quality categories.

Research Activity Indicator 3 (RAI 3): Peer Esteem

The purpose of this metric is to capture the overall scholarly standing of Category A and Category B researchers within the unit, based on information presented in their IRIS profile. Evidence of peer esteem, across the career as a whole, includes publication output, Fellowships, Honours, Invited Plenary Presentations at significant disciplinary conferences, service on appointment Panels at other institutions, external examining, translation of works, refereeing/editing of journals etc., as well as significant research activity which occurred before the review period began (e.g. widely cited publications, international prizes awarded, etc.). The rating given to an individual should reflect the level of the individual's achievements across his or her research career as a whole. The Panel will determine the quality profile for each individual researcher. The overall quality profile will be finalised by the Panel.



Research Activity Indicator 4 (RAI 4): Research-related Activities

For the purposes of the RQR 'research-related activity' is intended to capture activity within and beyond the unit by individual or groups of researchers in the unit. This includes seminar series, research-focused public engagement exercises, specialist training provision, collaboration, research mentoring, outreach activities, support for scholarly institutions, evidence of research-led teaching at all levels, etc. The evidence for this will be collated from individual's IRIS profiles, and the contextual information supplied by the unit.

Each member of the Panel is asked to give a single quality level for the collective research-related activities of the unit based on their professional judgement.

The modal (most frequently occurring) rating across reviewers will be taken as the research-related activity score. [The higher rating will be preferred where the distribution of ratings is multimodal.]

Research Activity Indicator 5 (RAI 5): Postgraduate Research Education

Panel members are asked to each give a single quality level for the collective activities related to postgraduate training. This rating should reflect the professional judgement of the peer reviewers concerning the quality level descriptors provided, taking into account the number of students studying for research degrees, culture of support (i.e. arrangements for supervision), and research training environment and opportunities available for research students within the unit under review. The evidence considered will include a statement on postgraduate research submitted by the unit, information from published unit web-pages, numerical data from university offices regarding completion rates, completion times, etc. and process used by the unit to ensure that these are satisfactory.

Each member of the Panel is asked to give a single quality level for the collective research-related activities of the unit based on their professional judgement.

The modal (most frequently occurring) rating across reviewers will be taken as the research-related activity score. [The higher rating will be preferred where the distribution of ratings is multimodal.]

Research Activity Indicator 6 (RAI 6): Research Income

Each member of the Panel is asked to give a single quality level for the collective research-related income of the unit based on their professional judgement of the research area, taking into account the Research Landscape relevant to researchers in Ireland as described in the briefing documents provided. The modal (most frequently occurring) rating across reviewers will be taken as the research-related activity score. [The higher rating will be preferred where the distribution of ratings is multimodal.]

List of Panels & Units

Panel A

School of Medicine, incorporating:

- Department of Medicine (inc Radiology)
- Department of Surgery (inc Anaesthesia)
- Department of Pathology (inc Med Microbiology)
- Department of Psychiatry
- Medical Education Unit

Panel B

School of Medicine, incorporating:

- Centre for Gerontology & Rehabilitation
- Department of Epidemiology & Public Health
- Department of General Practice
- Department of Paediatrics & Child Health
- Department of Obstetrics & Gynaecology

Irish Centre for Foetal and Neonatal Translational Research (INFANT)

Panel C

School of Clinical Therapies, incorporating:

- Department of Occupational Science & Occupational Therapy
- Department of Speech & Hearing Sciences

University Dental School & Hospital

School of Nursing & Midwifery

School of Pharmacy

Oral Health Services Research Centre (OHSRC)

Panel D

School of Medicine, incorporating:

- Department of Anatomy & Neuroscience
- Department of Pharmacology & Therapeutics
- Department of Physiology

School of Food & Nutritional Sciences

Department of Microbiology

Department of Biochemistry

Panel E

Department of Chemistry

School of Biological, Earth and Environmental Sciences (BEES), incorporating:

- Geology
- Plant Science
- Zoology & Ecology

Environmental Research Institute (ERI)

Analytical & Biological Chemistry Research Facility (ABCRF)

Panel F

School of Computer Science & Information Technology

School of Mathematical Sciences, incorporating:

- Mathematics
- Applied Mathematics
- Statistics

Panel G

School of Engineering, incorporating:

- Department of Civil & Environmental Engineering
- Department of Electrical & Electronic Engineering
- Department of Process & Chemical Engineering

Department of Physics

Tyndall National Institute

Panel H

School of Geography & Archaeology: the Human Environment, incorporating:

- Department of Geography
- Department of Archaeology

Cork Centre for Architectural Education

Panel I

Department of Accounting Finance & Information Systems (BIS)

Department of Accounting Finance & Information Systems (AF)

Department of Food Business & Development

Department of Management & Marketing

School of Economics

Centre for Policy Studies

Panel J

Department of Government

School of Law

School of Sociology & Philosophy, incorporating:

- Department of Sociology
- Department of Philosophy

Study of Religions

School of Applied Social Studies

Institute for Social Science in the 21st Century (ISS21)

Panel K

School of Applied Psychology

School of Education

Panel L

School of Irish Learning, incorporating:

- Department of Modern Irish
- Department of Early & Medieval Irish
- Béaloideas/Folklore & Ethnology

Panel M

School of Languages, Literatures and Culture, incorporating:

- Department of French
- Department of German
- Department of Spanish, Portuguese & Latin American Studies

- Department of Italian

Asian Studies

Panel N

School of History, incorporating:

- Department of History
- History of Art

Department of Classics

School of English

Panel O

School of Music & Theatre, incorporating:

- Department of Music
- Drama & Theatre Studies

Section C: Panel Reports

PANEL A REPORT

Units in Panel A

Medical Education Unit
Medicine
Pathology
Psychiatry
Surgery

Panel A Members

Chair: **Professor Carmine M. Pariante**,
Kings College London
DVC for Medical Education: **Professor Jan Illing**,
Durham University
DVC for Medicine: **Dr Deirdre Lane**,
University of Birmingham
DVC for Pathology: **Professor Joanne Martin**,
Queen Mary University of London
DVC for Psychiatry: **Professor Ania Korszun**,
Queen Mary University of London
DVC for Surgery: **Dr Deirdre Lane**,
University of Birmingham

Panel A: Medical Education Unit

Introduction

The Medical Education Unit was set up in 2013/4, and therefore did not take part in the previous research assessment exercise in 2009. The team was previously operating under the School/College. It is clear that several members of the team are high-fliers in medical education and their projection for the future development of the unit is high. There are also newcomers to the field who will need time to become established.

The Medical Education Unit is made up of 17 staff, several of whom are part-time; hence the staff composition is only 14.6 FTE. There are five Senior Lecturers and 12 lecturers holding a range of leadership roles. Unusually, there are no Professors, no readers and no research associates in the unit.

As the unit is newly established, the themes and research strategy for the unit are appropriately in the developmental stages. Nonetheless, the unit has breadth within these themes which are of international interest.

The research statement highlights several challenges for the unit which include a lack of administrative support for research activities, a lack of office space for research staff and students, and a lack of research only staff to support research. It is also not clear how much protected time each member of staff has to undertake research alongside other academic and administrative duties including a heavy teaching workload. It is noteworthy, and to the credit of the unit, that so many staff have submitted research for review, which has been achieved alongside substantial teaching.

Other challenges referred to are the short, fixed-term contracts that affect the majority of staff. Indeed, the majority of staff secured tenure-type contracts through a "contract of indefinite duration" process; however, at the time of this review, the majority of staff are at the end of that process. Historically, this has significantly hindered forward planning, created significant uncertainty, and become an obstacle when applying for principal investigator roles.

RAI 1 - Selected published output

Outputs were rated by four international experts for originality, significance and rigour. In total 65 outputs were assessed by reviewers (three members of staff were excluded and three members of staff who were part-time submitted less than five papers). It is noted that many of the part-time staff submitted five papers which is to be commended.

There were 18 papers (28%) that were rated 'excellent' or 'very good', and a further 23 (35%) that were rated as 'good'. Overall two thirds (63%) of the outputs were rated 'good', 'very good' or 'excellent'. A further 23 (35%) of outputs were rated 'fair' or 'poor' (1.1%). This is a significant achievement given the high levels of teaching and distractions over employment contracts.

The selected published output of the unit has been demonstrated to be of a good standard.

RAI 2 - Total published output

Based on 14 members of staff, the RAI 2 ratings for extent, diversity and quality were as follows: 21% of outputs were rated very good or excellent, 50% were rated good, 21% were rated fair and 8% rated poor. This means that the

extent, diversity and quality (50% or above) is good. Again, for such a new unit this is a very promising start.

The total published output of the unit has been demonstrated to be of a good standard.

RAI 3 - Peer esteem

The unit's range of involvement at national and international level with membership on Irish Medical Council boards, Royal College boards, members of Irish medical education networks, editorial boards, and presidents of society's and health and training committees is very impressive indeed, particularly given the relatively small size of the unit. The research of SAFEMED is noteworthy with invitations to Harvard, Mayo Clinic, and Cleveland a positive sign for peer esteem.

Fifty percent of the peer esteem activity was rated 'very good' or 'excellent' and a further 35% of activity was rated 'good' and 15% rated 'fair' or 'poor'. This means that the peer esteem is rated 'very good' (50%).

The peer esteem activity of the unit has been demonstrated to be of a very good standard.

RAI 4 - Research-related activity

The research-related activities included hosting several national conferences, seminars and meetings. The INMED conference was particularly well attended with 150 delegates. The unit has been responsible for setting up undergraduate student mentorship which has led to a number of student publications as well as being singled out for praise by the accredited bodies. The unit was involved in a major European project on standards and output in medical education which led to several major publications.

The unit's range of involvement at national/international level with membership on Irish Boards, networks, editorial boards, and societies is very impressive indeed. As regards impact, the unit has achieved significant impact with regard to changes in policy and practice with respect to their research on: entry and selection, clinical learning environments and interdisciplinary problem solving on real-life clinical problems.

The research-related activity of the unit has been demonstrated to be of an excellent standard.

RAI 5 - Postgraduate research education

The unit has set up a master's degree in 2013 in partnership with the Department of Surgery, with 20 students currently enrolled. Two members of staff are supervising doctoral or master's level students, with 9 students in total. Staff are also invited as thesis examiners, with several international invitations. This is a significant achievement given the unit was established in 2013/14.

The postgraduate research education of the unit has been demonstrated to be of a very good standard.

RAI 6 - Research income

Funding in medical education is internationally very limited and available funds are mainly very small compared to clinical research. The unit has, however, won some very large grants for example: €630,000 EU lifelong learning programme; €799,324 EU grant; €150,000 Health Research Board Ireland; €299,509 Erasmus; €350,000 Health Research Board Ireland; €3,496,836 WP5 EU Grant and €300,000 EU Erasmus. However, due to the multi-partner nature of these grants, the income to institution is at times a fraction of the total grant income.

Achieving grants at this high level will increase the potential for the unit to continue to win large grants again in the future. There are few grant sources specifically for Medical Education internationally and, when available, they tend to be smaller than other fields. The fact that the group have achieved several large grants, given that some are on the periphery of medical education is not a weakness but a strength, showing both breadth but also skill in winning grant income that is a transferable skill.

The research income activity of the unit has been demonstrated to be of an excellent standard.

Areas of good practice

- This unit is working well with the School to develop the strategic vision, recognising that the unit has the potential to generate impact for teaching, policy and practice.
- Excellent leadership in the unit, and progress within the unit in such a short time.
- Good collection of established research themes which have currency and future potential.
- There are some really excellent research and outputs from the unit and individuals in the unit have potential to be high fliers internationally in the future.
- Innovations in teaching such as the inter-professional problem solving with real-life problems is excellent.
- Excellent networking at national level with key representation on national committees and very good international collaborations with research, PhD supervisors.
- Very good postgraduate activities at such an early stage in the life of the unit.
- Level of grant capture for the unit is excellent. The unit has achieved success in both research grant capture and in teaching and learning grant capture.
- Research leading to impact on policy and practice is excellent.

Recommendations for future development

- The appointment of a Professor for the unit is critical. This needs to be taken up at University level.
- Continue to develop unit and explore potential to rise to become a centre in the future. This might involve expanding the unit with staff already working in the field e.g. with IMC, new simulation unit and working with colleagues in education, social sciences and hospital trusts. Head of School to broker liaison with ASSERT to ensure medical education has representation and key staff are involved in this new initiative.

- Future funding is critical to the development of the unit for the appointments of research associates and PhD students (latter could be self-funded). Continue with applications to Europe etc., but consider other options e.g. IMC, trusts, Royal Colleges and UK funders via collaborations.
- Encourage the development of themes within the unit and develop areas of expertise by building on relationship within UCC, nationally and internationally.
- Explore options as regards space for new and existing staff.
- Seek administrative staff to support research activities, including external funding.
- Contracts to be reviewed at University level with HR and Head of School.
- Workload model should be reviewed at University level to ensure staff has protected time for research.

Concluding statement

The Medical Education Unit would be very competitive at an international level. Comments from strong external Irish competitors (views gained after this assessment) would rank the Cork Medical Education Unit number one. Given the challenges of succeeding in medical education research, the research activity of the unit has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel A: Medicine

Introduction

The Department of Medicine comprises 12 Category A and one Category B staff. Only seven Category A and one Category B staff submitted publications and other information for review. No information on research income was submitted by the unit. In addition, the Department was not available to meet with the Panel during the site visit in May.

Therefore, the unanimous decision of the Panel was that, due to lack of information, including no information from five Category A staff and the lack of engagement in the Research Quality Review process by the Head of the unit, we were not able to assess the Department of Medicine.

Comments

The publications submitted were independently assessed by three Reviewers. Overall the research reviewed was of very good quality.

Overall, the high number of current postgraduate students and successful award of 30 doctoral degrees in the review period, plus evidence of peer-reviewed publications arising from the supervision, demonstrates an effective and high standard of educational supervision, which is to be commended.

The Research Statement provided by the Department highlights that the vast majority of those contributing to the mission of the Department are employees

of the health service rather than the University and consequently this Research Quality Review (RQR) for Medicine would only assess ~10% of the personnel and activities of the Department of Medicine.

Recommendations

- It is recommended that all Departmental staff should be encouraged to support future Research Quality Reviews to facilitate further development and demonstrate public accountability.
- It is recommended that all Departmental staff be encouraged to update their IRIS page information and include information on research-related activities (i.e. research-led teaching and outreach activities) and research income.

Panel A: Pathology

Introduction

The Department of Pathology sits within Cork University Hospital, with the academic team comprising expertise in Genetics, Medical Microbiology and Molecular Immunology. The Department has four staff considered in this review, one of who is finishing their postgraduate study, but whose post comes to an end within the next month, with two other full time posts and an acting Head of Department who is a clinical academic with a part-time academic commitment. The Department is in a period of change, with the replacement of a Professorial appointment at the recruitment stage, and the imminent arrival of a 0.27WTE clinical academic post, subject to appropriate clinical cover arrangements.

The Department is housed across disparate poor quality estate, shares some facilities for immunology with Medicine but does not have access to some key equipment.

It has an active postgraduate teaching programme and funding that supports the research programme.

The Department has a very heavy teaching load, across undergraduate medical and dental programmes, biomedical sciences, forensic medicine, genetics and microbiology, with some highly research active members having 150+ hours of contact time.

RAI 1 - Selected published output

All 20 submitted papers were reviewed by independent remote reviewers. Seven outputs were rated excellent, six were 'very good', four were 'good', two were 'fair' and one was 'poor', with 65% of papers rated 'very good' or above, and 85% 'good' or above. The returns covered a very wide range of subject matter.

The selected published output of the Department has been demonstrated to be of a very good standard.

RAI 2 - Total published output

The total published output of two researchers was

considered 'very good', one was considered 'good' and one was considered 'fair'.

The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

This area was hard to achieve a consensus score since the peer esteem activity of two researchers was considered 'very good', one was considered 'good' and one was considered 'fair', however, overall the Panel felt that the Department was very good.

The peer esteem activity of the Department has been demonstrated to be of a very good standard.

RAI 4 - Research-related activity

There is good evidence of presentations and participation at local and international conferences. Three members have a significant portfolio of patient and public facing activity, including work with schools. There are several multidisciplinary research collaborations across the University, including Microbiology, Medicine and Histopathology.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 - Postgraduate research education

Although the Department is relatively small it has several postgraduate students associated with two Department staff, and demonstrates a high standard of educational supervision also evidenced by the students' high levels of success. Five students have graduated within the assessment period, and four more are in progress. In addition, two members of the Department supervise doctoral students in other Departments (Medicine and Microbiology).

The postgraduate research education of the Department has been demonstrated to be of a good standard.

RAI 6 - Research income

The level of funding is uneven across the Department, with good levels associated with the microbiology and immunology, but patchy funding in the smaller groups. In a climate of decreasing funding, the group has raised approximately 1 million euros funding over the assessment period.

The research income of the Department has been demonstrated to be of a very good standard.

Areas of good practice

- Excellent multidisciplinary research collaborations were in place.
- A good collaborative laboratory culture between Medicine and the Brint group existed, making very good use of facilities.
- Novel and important areas of research.

- Strong focused areas of study were present in microbiological genomics and intestinal immunology. Clinically focused areas of human genetic research relevant to the local community.
- Good results were achieved in a period of uncertain staffing and very high teaching levels.

Recommendations for future development

- This unit has achieved well under difficult circumstances. The balance of teaching and research in a small Department is difficult to maintain. The teaching and training commitment of several of those submitted is evident from the training courses and qualifications obtained, the very high workload and the number of modules delivered and assessed. There should be investment to spread this load and enable the academic staff to concentrate more time on research.
- The replacement lecturer post is a priority, and the research area should align to one of the existing areas to support development of critical mass.
- There are few longer term international collaborations outside the area of microbiological genomics, and the investigators may consider how to develop these broader networks.
- The College should refurbish the Pathology Department, to create a safe working environment that is fit for purpose.
- The College should provide confocal microscopy and flow cytometry facilities in the Department, and technical support for the category 3 unit.

Concluding statement

This is a relatively small unit producing some excellent work, in three focused areas, but with disparate research areas and limited funding.

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel A: Psychiatry

Introduction

The Department of Psychiatry comprises three category A and three category B staff. In addition, there are two recently appointed post-doctoral fellows who are not subject to review here.

The Department's stated research strategy aims are to carry out multidisciplinary research to promote bidirectional scientific translation from the bench to bedside and back in the area of mental health. It is further emphasised that the programmes are scientific, focused and hypothesis driven.

The aims are achieved through an interaction between neuroscientists and clinical psychiatrists working together on understanding the pathophysiology of certain psychiatric diseases, identifying biomarkers and developing therapeutic strategies.

The Department also has an active and successful postgraduate teaching programme and has secured an impressively high level of funding that supports the research strategy.

RAI 1 – Selected published output

All 30 papers were reviewed by independent remote reviewers. Seventeen papers (57%) were scored very good or excellent, and 23 papers (77%) were considered good, very good or excellent.

The selected published output of the Department has been demonstrated to be of a very good standard.

RAI 2 – Total published output

Total published output was reviewed by remote reviewers with a high level of agreement between the two reviewers.

The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 – Peer esteem

Peer esteem was reviewed by remote reviewers and additional information was obtained by the Chair and DVC at the site visit. There is evidence of extensive peer esteem for the research of this Department. The work of the Department is well known internationally and members participate in several committees such as the European Medicines Agency, Department of Defense, USA. The research carried out in the Department has been profiled in prominent publications such as: The New Yorker magazine, New Scientist, Economist and Psychology Today. A recent issue of the Journal of the American Medical Association (JAMA) featured an interview with a lead academic of the group, on microbes and the brain.

The peer esteem activity of the Department has been demonstrated to be of an excellent standard.

RAI 4 – Research-related activity

There is exceptional evidence of presentations and participation at local and international conferences.

The research-related activity of the Department has been demonstrated to be of an excellent standard.

RAI 5 – Postgraduate research education

Although the Department is relatively small, it has a high number of postgraduate students, currently there are 11 PhD/MD students, as well as a further 12 post-doctoral students supervised in Psychiatry through Core 4 (Brain and Gut) of the Alimentary Pharmabiotic Centre (APC). The Department demonstrates a high standard of educational supervision evidenced by the students' high levels of success and completion rates of doctoral degrees within four years.

The postgraduate research activity of the Department has been demonstrated to be of an excellent standard.

RAI 6 – Research income

The Department of Psychiatry has achieved an impressively high and consistent level of funding. There is a strong partnership with many other research centres and initiatives, especially a collaboration with the Department of Anatomy and Neurosciences in Core 4 of the APC, which has brought in 50 million euro over the last few years. There are also several collaborations with industries nationally and internationally, and funding from the Department of Agriculture and Food. This funding has resulted in a centre with excellent laboratory facilities, including an animal facility that provides the necessary base for securing further funds and developing a world class centre of excellence in behavioural neurobiology.

The research income activity of the Department has been demonstrated to be of an excellent standard.

Areas of good practice

- Excellent multidisciplinary research collaboration and clear evidence that the Department has followed the recommendations of the last research quality review of 2009 in developing a clear and focused research strategy, and further developing collaborations with the APC and other centres.
- The research strategy addresses a novel and important area of research and the Department has excellent public engagement.

Recommendations for future development

- At the last review it was recommended that there should be an investment in further tenured academic staff, and further investment in, for instance, a researcher at Senior Lecturer level is recommended.
- The Department has been very successful in obtaining funding and this is assured for at least three years. This means that there is a good infrastructure and facilities that would provide an excellent opportunity for a new researcher at this level to develop and also further increase the output of the Department.

Concluding statement

This is a relatively small unit producing excellent work that has attracted an impressive amount of funding. The research activity of the Department has been demonstrated to be excellent and of leading international standard.

Panel A: Surgery

Introduction

The Department of Surgery (including Anaesthesia) comprises seven Category A staff and no staff from Category B or C. The original list of staff contained one additional name but the Head of Department confirmed this person was not member of staff in Surgery. All members of the Department of Surgery, except one, are clinicians with 50% or more FTE commitment to clinical work. This report is based on the six Category A staff involved in research.

The Research statement identifies three main areas of research interest in this Department with a narrow but topical focus: cancer with an emphasis on molecular and cellular mechanisms underlying perioperative tumour growth and metastasis in breast and colorectal cancer; surgical infection/sepsis with an emphasis on cellular reprogramming of intracellular signal transduction pathway in inflammatory cells/phagocytes; and clinical surgical techniques and technique evaluation (in the area of wound closure and fine needle aspiration). In addition, other major areas of research interest are anaesthesiology and evidenced-based health training with the establishment of the ASSERT simulation teaching and research centre.

RAI 1 – Selected published output

One person only submitted two publications for review. One other publication did not appear to be authored by the person who submitted it and therefore was not included in the review. All 26 remaining papers were reviewed independently. Of the papers reviewed, 69.3% were considered to be good or better, and 38.5% were considered to be very good or excellent. The selected published output of the Department has been demonstrated to be of a good standard.

RAI 2 – Total published output

IRIS profiles were only available for three members of the Department, and for one member the only information available was on publications but this was not up-to-date. Where information was available there was high level of published output, all of which was good quality or better. The total published output of the Department has been demonstrated to be of a good standard.

RAI 3 – Peer esteem

It was difficult to fully assess this research indicator as information was only available for half of the Department. However, the available information demonstrated markers of peer esteem indicating national standing.

The peer esteem activity of the Department has been demonstrated to be of a good standard.

RAI 4 – Research-related activity

There was lack of written evidence of presentations and participation at local and international conferences but discussions with members of the Department demonstrated that staff were engaged in national conferences and some international conferences. There was evidence of successful internal collaborations, particularly with Medicine and Biochemistry and also successful international collaborations. The research-related activity of the Department has been demonstrated to be of a good standard.

RAI 5 – Postgraduate research education

Two members have jointly supervised 21 MD students to successful and timely completion and an additional 11 MD/PhDs were awarded between 2008 and 2011

(verbal information only - no names or details). There are currently eight postgraduate students, all of whom are registered for a MD, jointly supervised by one or more members of the Department ± one clinician.

All doctoral degrees were funded by the Department from external sources for two years of full-time research and in the past six years no student has dropped out or been awarded a lower degree than that for which they registered.

Overall, the high number of current postgraduate students, and the successful award of >30 doctoral degrees in the review period, demonstrates an effective and high standard of educational supervision, and should be commended particularly given the considerable clinical commitments of the staff providing supervision.

The postgraduate research education of the Department has been demonstrated to be of an excellent standard.

RAI 6 – Research income

Details were provided by the Department about their research income which appear highly successful with funding from national and international funding councils and pharmaceutical/industry partners.

The research income activity of the Department has been demonstrated to be of a very good standard.

Areas of good practice

- Multidisciplinary research collaborations with particular strengths in certain research areas
- Postgraduate research supervision and successful award of doctoral degrees
- Research income

Recommendations for future development

- It is recommended that consideration be given to further consolidation of links with the Alimentary Pharmabiotic Centre.
- It is recommended that consideration be given to developing a research collaboration with the Department of Medical Education and Anaesthesiology with the ASSERT centre (evidence-based training centre).
- It is recommended that all members of staff provide or update their IRIS page information and pay particular attention to highlighting aspects of research-related activities and also to provide specific information on their research income.

Concluding statement

The Department has a good research income and is producing original research, of a good standard, and providing excellent postgraduate research supervision. The research activity of the Department demonstrates significance to the discipline and rigour to a good standard.

PANEL B REPORT

Units in Panel B

- Gerontology & Rehabilitation
- Epidemiology & Public Health
- General Practice
- Paediatrics & Child Health
- Obstetrics & Gynaecology
- INFANT

Panel B members

Chair: **Professor Eric Steegers**, Erasmus MC, Rotterdam, The Netherlands

DVC for Gerontology: **Professor Peter Crome**, University College London

DVC for Epidemiology: **Professor Mark McCarthy**, University College London

DVC for Paediatrics: **Professor Vineta Fellman**, Lund University, Sweden

DVC for Obstetrics: **Professor Fiona Lyall**, University of Glasgow

DVC for INFANT: **Professor Mark D. Kilby**, University of Birmingham

How the Panel went about the business of the review

The UCC RQR Steering Committee provided advice on the structure of this Report.

The Disciplinary Vice Chair (DVC) for General Practice was unable to attend. His work was covered by the DVC for Epidemiology & Public Health.

During the first day, after the input by the steering committee, initial draft reports of the units prior to the visits that afternoon were discussed. In particular, substantial mutual agreement was achieved on scoring the Research Activity Indicators.

The second day was used to individually adapt the draft reports according to the input provided during the visits and to discuss those between the members of the Panel.

During the evening of the second day and early morning of the third day, final reports were drafted by the individual DVCs to be discussed and agreed later in the morning by the Panel. These reports were guided

by disciplinary norms. Furthermore, summary slides were prepared for each unit as well as some general introductory and concluding remarks of the Panel as a whole, for the individual exit preparations that afternoon.

General observations and comments

The members of the Panel were impressed by the hospitality and professionalism of the Quality Promotion Unit and the RQR Steering Committee. UCC shows a remarkable ambition in performing such RQR for the second time. Furthermore, we recognised the ambition in transforming the health service to an Academic Health Centre. We experienced generally good, enthusiastic engagement from the units during the visits.

As set out in the Guidelines, the units were assessed and scored as a whole and to international disciplinary standards rather than local or national standards.

There seemed to be some diversity on how units presented their material for the RAIs and not all researchers provided their top five peer-reviewed publications for assessment. Forwarded publications may be the best cited, the most important for their careers or grants achieved or important for their national field in being societally relevant.

The Panel recognised the limitations put upon UCC by the national budget cuts and the moratorium on fixed terms of academic personal and the opportunities for promotion to Professor.

Panel B: Gerontology & Rehabilitation

Introduction

The Centre for Gerontology and Rehabilitation (CGR) was established in 2010 with support from Atlantic Philanthropies (AP, a major US-based grant giving organisation) and the Health Service Executive (HSE). It is housed within the Department of Medicine. This funding has provided the salaries of academic, administrative and support staff but is time-limited. Discussions are underway on the future funding streams for the Centre. These have not yet been finalised.

The Centre's three priorities are:

"To deliver optimal research outputs that yield a positive impact on the older community in Southern Ireland. To increase research funding income to the CGR. To promote high quality teaching in the areas of gerontology, rehabilitation and end-of-life care in UCC, for healthcare professionals in all care settings."

The Centre has translated these priorities into more focused objectives, initiatives and assessment metrics.

The Centre presently has two PIs, a Professor and a Senior Lecturer. There are ten other staff members. The Professor previously worked in another country and a theme of the Centre's approach has been the transference of research and service changes to the Irish situation. The research activities of another Category A staff member, who has been seconded temporarily from another Department in UCC were included in the Centre's submission.

These three Category A staff have a 50%, 50% and 80% commitment to the Centre. The IRIS profiles identified that the focus of research is on the inter-related areas of advanced care planning and decision making, palliative care, dementia, delirium and the improved care of older people in general hospitals.

The Centre is based at St. Finbarr's Hospital in two separate locations. The clinical staff work at both St. Finbarr's Hospital and Mercy University Hospital. There are other research active geriatricians at Cork University Hospital who were not included in this submission.

Because the Centre was established during the assessment period it is not possible to compare its performance with previous reviews.

The Head of the Centre did not meet the Panel.

RAI 1 - Selected published output

The submissions under this heading included a book, book chapters and an audit report. These latter submissions (chapters and report) indicate the breadth and impact of the staff members' activities but were not regarded by the Panel as research publications.

The Impact Factor of the journals in which two of the PIs have published was considered to be good or very good with a few papers being published in higher impact journals (none above 8). The remaining member of staff has published in lower ranking journals or in journals without a citation index.

The selected published output of the Centre has been demonstrated to be of a fair standard.

RAI 2 - Total published output

The three staff members listed 32, 21, and 22 publications for 2008-2014 in the peer-reviewed journals section of their IRIS profile. However, not all of these were considered research papers. There is also a variety of other publications including a book, book chapters, professional articles and published conference abstracts.

The papers have been published in appropriate specialty journals. The nature of the Centre's current projects makes it difficult for any resulting papers to be acceptable for high impact international medical journals. The total published output of the Centre has been demonstrated to be of a good standard.

RAI 3 - Peer esteem

The submission indicates evidence of a limited number of esteem indicators as listed to be included under this heading. Reported esteem indicators include membership of a Research Board and Presidencies of national specialty societies. The submission lists relatively few international invitations and activity within international societies and conferences. One of the staff members has developed standardised tools for use in dementia trials that are widely used throughout the world and have been cited several hundred times.

The peer esteem activity of the Centre has been demonstrated to be of a good standard.

RAI 4 - Research-related activity

The Centre has demonstrated that it has participated in a wide range of research-related activities which have been listed under the headings of seminar series, research-focused public engagement exercises, specialist training, collaboration, research mentoring, research-led teaching, external engagement, trans-disciplinary interaction and evidence of impact.

The Centre is fulfilling its commitment to the improvement of the health of local older people by organising numerous meetings with lay audiences and health care professionals.

There is a broad range of educational activities at national and institutional level including the opportunity for health professional to undertake an MSc in Older Person Rehabilitation. The multi-disciplinary nature of these activities is demonstrated by programmes for nurses on advanced care planning, other end-of-life issues and community screening.

The Centre has a wide range of collaborative relationships within UCC, other Irish educational institutions and within Europe through the FP7 programme.

The Centre highlights the following areas to illustrate the impact of their work - advance care directives, international collaboration in delirium, recommendations for improving the care of people with dementia in acute hospitals and the roll-out of community assessment of risk and treatment strategies. These areas are of major importance not only to older people but to their families in Ireland and elsewhere.

The Centre's completed projects are mainly at the stage of publication and the transference of their findings into clinical practice. The impact of these service changes has yet to be evaluated formally.

The research-related activity of the Centre has been demonstrated to be of a good standard.

RAI 5 – Postgraduate research education

As is appropriate for a Centre for Gerontology and Rehabilitation, PhD and MSc students come from a range of disciplinary backgrounds – medicine, pharmacy, physiotherapy and nursing. Since the Centre started, one PhD and one MSc student have completed. Three students are due to complete in 2015. These students will return to their former professional positions in clinical medicine and engineering. Regular supervisory sessions are held with the PGR students. The students the Panel saw rated these highly. The Centre also runs a modular postgraduate teaching programme including an MSc stream. There is an opportunity for greater integration of postgraduate training between the two permanent staff's research teams.

Two of the PhD students have published independent research in peer-reviewed journals and there are a large number of presentations at appropriate national conferences. There does not appear to be a formalised internal seminar series with a mixture of both internal and external speakers.

The postgraduate research education of the Centre has been demonstrated to be of a good standard.

RAI 6 – Research income

The majority of the Centre's research income to date has come from start-up funding from Atlantic Philanthropies and the Health Service Executive (€4.4 M out of €5.9 M). The former funding ends in 2016. The remaining funding comes from a variety of external sources including two EU FP7 programmes but the Centre does not co-ordinate either of the projects in which it participates.

Only two of the research projects and one studentship will continue beyond 2016. However, the Centre is actively seeking continuing funding and listed a number of funding bodies to which it has applied.

The findings from completed projects have principally been disseminated through meetings and published conference abstracts but not yet through major peer-reviewed publications.

The ability of such a small Centre to continue to attract significant funding as a continuing income source for their existing staff following the loss of start-up funding may prove problematic.

The research income activity of the Centre has been demonstrated to be of a very good standard.

Areas of good practice

The following areas of good practice were identified:

- There is a clear framework of how the success of the Centre should be judged.
- There is active participation in European Initiatives through FP7 projects and the European Innovation Partnership on Active and Healthy Ageing.
- There is good collaboration with local government, NGOs and other academic units in UCC and other Universities.
- The PIs have a research focus on the major clinical problems in later life which have been under-researched and in which practice has been problematic in the past.
- The Centre has established research-based teaching programmes that offer a pathway for those considering higher doctoral studies.
- Members of the Centre have demonstrated active engagement with all sections of the local community.

Recommendations for future development

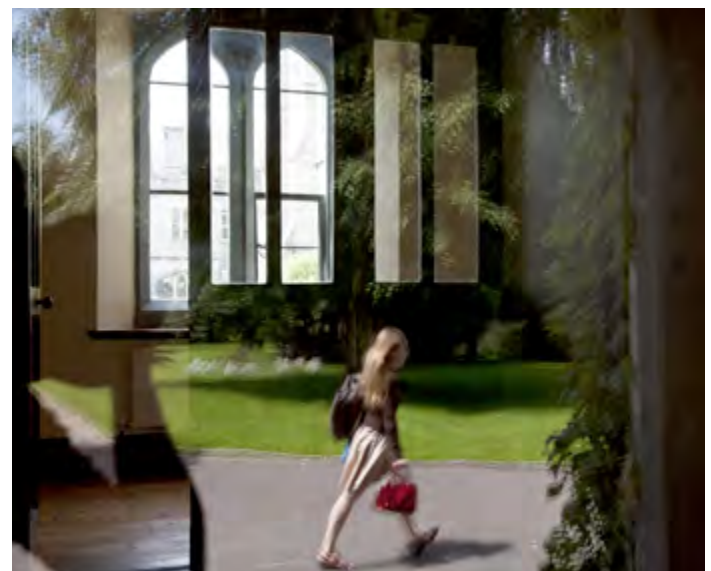
The major priority for the Centre should be to finalise the contractual arrangements for the existing staff members following the withdrawal of AP funding.

The College of Medicine and Health should oversee arrangements so that the research of all academics involved in healthcare of older people is integrated.

There should be greater international exposure of research findings through conferences etc.

Ratchet up research to a national level - aim to lead multi-centre trials.

Publications should be aimed at high impact general medical journals as well as specialty journals.



If clinical facilities permit, income-generating commercial activities should be considered e.g. RCTs in the field of dementia and delirium.

The two sites for the Centre should be centralised, thus facilitating integration between the two research groups.

Concluding statement

In the relatively short time of its existence The Centre for Gerontology and Rehabilitation has managed to fulfill its founding mission. Bearing in mind its small size, it compares well with international comparators in its field.

The research activity of the Centre demonstrates significance to the discipline and rigour to a good standard.

Panel B: Epidemiology & Public Health

Introduction

The Department has its origins within the Medical School for teaching undergraduate medical students. Since 2008, the Professor/Lecturer staff number has risen from seven to 12 FTE equivalents, and the Department has been relocated in high-quality offices within the campus, funded through the PRTL-5 capital programme.

The Department has a core group of established and emerging research leaders in diet and health research, cardiovascular disease and diabetes epidemiology, occupational health, health services research (currently assessing emergency departments) and work on the causes and prevention of suicide and self-harm.

The Department has also gained strength through developing new teaching (including an important BSc in Public Health which now graduates 30 students a year, and a 'feeder' into the research programme), support for young career scientists (through the Health Research Board-funded Scholar Programme entitled SPHeRE) and enabling contacts between the Department and other researchers both within UCC and externally. The Department now offers teaching for around 200 students a year in undergraduate, masters and postgraduate certificate courses (some taught on-line), as well as contributing elsewhere across the university.

RAI 1 - Selected published output

The main fields of research publication include epidemiology (diet and health), occupational disease, health services research (including accident services) and broader public health (including suicide prevention). There are also significant collaborations with college departments within UCC.

The submitted publications were refereed by three sub-unit assessors (one requested assessor did not provide a response). Where two reports were available, there was high consistency.

The referees indicated strong support for the quality of publications. Overall, the publication output of six researchers was considered to be excellent. For Category A researchers, 10 out of 15 achieved ratings across the five papers of excellent or very good. For Category B researchers, four out of seven achieved average ratings of excellent or very good.

The selected published output of the Department has been demonstrated to be of a very good standard.

RAI 2 - Total published output

The Research Statement reported that there had been 892 "unique research outputs" published over the review period. 434 were journal articles and 417 were published in international journals and high impact journals including Nature, Lancet, PLOS Medicine, International Journal of Epidemiology, Diabetes, as well as Diabetes Care, The Journal of Clinical Endocrinology and Metabolism, PLOS One, Journal of the American Geriatric Society, Journal of Child Psychology and Psychiatry, Preventive Medicine, Journal of Epidemiology and Community Health, BMJ Quality and Safety and Cochrane Reviews.

Two of the three referees quantified this metric. Of the 19 researchers assessed, 11 were considered to be excellent or very good, while eight were considered good or fair. All the PIs appeared to be successful in this metric.

The total published output of the Department has been demonstrated to be of an excellent standard.

RAI 3 - Peer esteem

A high level of scoring was gained for peer esteem, perhaps reflecting the longer time needed for epidemiological research from initiation to final publication than in laboratory sciences.

The Department's members have created studies that link internationally (European-wide) and with national bodies, including the Health Research Board (Centre for Health and Diet), HRB Research Leaders award, HRB Interdisciplinary Enhancement Award, HRB Clinical Health Professional Award. Members have gained funding for the health services research training programme, in association with two partners in Dublin, towards a forthcoming collaborative National Health Services Research Institute. The Department has also worked closely since 1999 with the National Suicide Research Foundation.

Two of the three referees provided this metric, and assessed the staff members highly: of the 19 assessed, the peer esteem activity of 15 researchers, including all PIs, was considered to be 'excellent' or 'very good', while the peer esteem activity of four was considered to be 'good'.

The peer esteem activity of the Department has been demonstrated to be of a very good standard.

RAI 4 – Research-related activity

Department members have contributed to international research activities including coordination of the TRUST EU-wide clinical trial, the DEDIPAC EU Joint Programming Initiative on diet and physical activity, the CASE WHO/Euro Multicentre study on Suicidal Behaviour, Child and Adolescent Self Harm, the European Network of Cancer Registries, and consultation on the disciplinary review of the EU Seventh Framework programme.

The Centre for Health and Diet contributed to the 2014 McKinsey Global Institute report “Overcoming obesity: An initial economic analysis”. There are student and staff exchanges and collaborative funding with the UK, other European countries and North America.

Staff members hold senior positions in national health and research advisory organisations. There has been strong collaboration with national groups, including ongoing major national cohort studies (the Growing up in Ireland Children’s cohort study and the Irish Longitudinal Study on Ageing [TILDA]). The National Self Harm Registry developed a new Suicide Support & Information System (SSIS) in collaboration with Coroners’ courts, providing data on suicide clusters in Ireland and support for bereaved families. There has been collaboration with commercial companies on applications from the Centre for Health & Diet Research.

There are internal UCC collaborations with the Science Foundation Ireland (SFI)-funded Alimentary Pharmabiotic Centre, the SFI-funded Infant Centre and the Health Research Board-funded Clinical Research Facility.

The Department holds regular departmental meetings with presentations from international and national speakers, as well as UCC and internal staff members.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 - Postgraduate research education

There has been a progressive increase in post-graduate and post-doc activities in the Department. Development of the public health BSc has provided strong first-degree training for postgraduate studies and a competitive field for applications.

The Department currently has over 20 PhD research students, working with senior staff members across a range of public health fields: both PhD students and selected Masters’ students contribute to the planning and conduct of fieldwork for major studies led by the Department.

Postgraduate students have a strong publishing record of research papers during their studentship: PhD students are generally required to submit up to five papers (and a minimum of three) for publication before submission of their thesis for examination. Students contributed to 35 papers published in 2014 and to 34 published in 2013.

Many students have demonstrated merit through awards, including Sheppard Memorial Prize, Horgan Bronze

Medal, best poster prize (Infectious Disease Society of Ireland), UCC team in Irish Healthcare Awards, Higher Education Authority competition for communication of research, IEA student poster award, and UK Society of Medicine best poster award.

A monthly research support group, for PhD students, post-doctoral researchers and senior staff, enables discussion of drafts of papers and challenging methodological issues in epidemiology and biostatistics. There is also good attention to career development for younger staff, and many postgraduate students have subsequently achieved further research positions both abroad (Harvard, MRC UK) and within the Department.

The postgraduate research education activity of the Department has been demonstrated to be of an excellent standard.

RAI 6 – Research income

There has been a substantial achievement in gaining research funding across a range of fields and agencies, both national and independent. Apart from the university’s funding for teaching, and important research funding support from the Irish Health Research Board and the National Suicide Research Foundation, the Department has developed applications across a wider range including European Union and North American sources. This diversity, which does not depend on a single funding agency, is important for the strategic development of new fields, for example new Professorial appointments in occupational health and health services research.

The UCC Research Statement described grant income to the Department of €8.3 million over the period, although it was difficult to correlate this total with the information provided for individual grants. (Some sums were reported across institutions and some only for UCC, and across various time periods). A second major sum of around €8 million (which included data collection) was gained for the National Study of Self-harm.

The research income activity of the Department has been demonstrated to be of an excellent standard.

Areas of good practice

The Department has been proactive in developing epidemiology and public health research. The field has been identified by UCC as one of five areas for priority, and the Department has benefitted in increased academic appointments and improved physical location.

The Department has a dynamic office setting which matches the laboratories of the biosciences, and ensuring a close relation between all staff and students. A quarterly newsletter, strengthening outreach, describes Department activities both in research work/publications/teaching, and also in community engagement and outreach – a benefit to UCC as a whole.

Departmental leadership has enabled excellence in gaining research grants from a wide range of sources, and this is matched by extensive scientific publication in international journals and significant recognition of senior staff at international and national advisory positions.

Recommendations for future development

The Department has responded well to the recommendations made in the 2009 review. A forward five-year strategy 2015-2019 proposes now to rationalise structures and governance, create an internationally competitive centre for population health sciences and health services research, and continue to provide opportunities for career development and progression for academic staff.

The Department will need to promote the varied themes across epidemiology (including nutrition, CVD and diabetes studies), and health services research (including A&E work and suicide prevention). Equally there is a need to work in depth on methodologies (such as implementation sciences, modelling and collaboration between statistical, social science and policy analyses in complex interventions), and to strengthen the opportunities from clinical joint appointments (such as those already with perinatal epidemiology and Irish cancer registry). Public health infectious disease research remains a significant opportunity for links both in field practice and also laboratory studies. Indeed, a further perspective may be to engage with global public health, where Ireland has some competitive advantage in international relations and can draw on a strong range of national systems for disease control.

There is also evident public engagement for the activities that are of central interest to the departmental leads. There should be strong public health teaching within medical undergraduate and postgraduate practice (both primary care and hospital training), as well as with public health practice at local level – where the results of research must be applied. This is an issue not only for Ireland but internationally, where there is increasing recognition of the population dimension in health as well as clinical sciences and clinical practice.

Concluding statement

The review shows a Department that is developing strongly, is research-focused and nationally influential. There is important cooperation with other research groups within UCC, members of the Department are recognised and contribute internationally across several allied fields of epidemiology and public health. Members provide important input to national policy as well as linking beneficially at local level with local issues.

Despite the fewer opportunities for population research compared with the biosciences and commercial pharmaceutical companies, excellence has been shown both in competitive income for medical research grants and in the major contribution of publications. The Department has appropriately developed links with the Health Research Board for both public health and health services research and has important developing collaborations across Europe and with North America. The strong research activity and high publication rate in international peer-review journals also reflects the Department's excellent performance in attracting and training postgraduate students, who now continue into post-doc careers as well as developing wider links in Ireland and abroad.

The research activity of the Department has been demonstrated to be excellent and of leading international standard.

Panel B: General Practice

Introduction

The research field of 'Primary Care and Other Community-Based Clinical Subjects', in the University's guidance covers a wide field of methodologies applied to primary care.

While primary care is an important component of medical practice (a third of all doctors are general practitioners), with significant issues particularly in the assessment of generic presentation and chronic disease management, most medical research is focused around specific diseases, and has a biomedical emphasis. This traditional imbalance is reflected very directly at UCC, where the Department of General Practice has a very small staff and low levels of University funding. Moreover, the requirement to pay teachers in primary care - when hospital staff teaching is free to the University - and to coordinate several part-time teachers in different settings, rather than full-time teachers in one setting, provides a further strain on the Department. Moreover, there have also been substantial increases in student numbers at UCC, both home students and because of unexpected extra teaching for clinical students from Malaysia, without commensurate resource support.

The limited public research resources available nationally are directed towards the General Practice Research Centre at the Royal College of Surgeons, Dublin. Within UCC, the Department has worked with the Department of Public Health and Epidemiology and the School of Pharmacy, which provide complementary disciplinary and teaching expertise. Nevertheless, the level of resources available for research is at a minimum.

RAI 1 – Selected published output

The staff in the Department have publications over the review period including those in fields such as audit in general practice, care of diabetes, management of epilepsy, and prescribing. These are relatively traditional subjects. Methodologies include GP audit and population registers. The external referee assessed the quality of the publications submitted, giving ratings of very good to fair for the three staff.

The selected published output of the Department has been demonstrated to be of a good standard.

RAI 2 – Total published output

The total published output of two staff members was graded on quantity by external referees. The journals were not regarded as high impact for medicine as a whole, although they are journals which are read by a broad multidisciplinary primary care community.

The total published output of the Department has been demonstrated to be of a fair standard.

RAI 3 – Peer esteem

The peer esteem activity of two members of staff was considered by the external referee. One staff member holds expert advisory positions in the UK.

The peer esteem activity of the Department has been demonstrated to be of a good standard.

RAI 4 – Research-related activity

The Department has undertaken activities in support of general practice knowledge, including professional presentations, national advisory work, undergraduate teaching and postgraduate student supervision.

There is collaboration with other centres in Ireland and UK for epilepsy care, including registers for epilepsy in pregnancy and epilepsy deaths.

Work to investigate prescribing practice has been assisted by a Health Research Board studentship. National study meetings have been organised.

Support has been gained from the Health Service Executive and The Atlantic Philanthropies (but starting in 2015) led by UCC through a general practice in Cork, to develop training and education on interventions for patients with dementia.

The research-related activity of the Department has been demonstrated to be of a good standard.

RAI 5 – Postgraduate research education

There is no established postgraduate programme for research training or career development. There have been just three funded PhD students over the full period, while co-supervision of PhD students from the Schools of Medicine, Nursing and Midwifery, and Pharmacy has been provided. Supervision is provided of Masters in Public Health students for their dissertations.

The postgraduate research education of the Department has been demonstrated to be of a fair standard.

RAI 6 – Research income

Academic income over the total period reached around €0.5 million; some of this has been for demonstration activities rather than research support. This level of income is poor for this type of clinical research unit.

The research income activity of the Department has been demonstrated to be of a fair standard.

Areas of good practice

The Department at present is very small; and while staff do seek to achieve research alongside their service and teaching activities, this has been limited in terms of grants and team development. There has been a focus on disease topics within primary care at clinical level, and a broad approach to gaining data through GP networks

and disease registers. The recent appointment of a second Professor opens potential for wider academic collaboration at national level and with the UK.

Recommendations for future development

While the Department works effectively for its size, the future would be enhanced through programme or centre grants to build up its infrastructure and capacity. It is a challenge to the University to resource this Department sufficiently, to release time for research grant development, and this would be achieved by a further full-time staff appointment (not necessarily clinical) at Senior Lecturer level and support for postgraduates. In developing internationally competitive research, a strengthening of quantitative approaches, including use of existing large data sets, may be a possible direction. Equally, partnerships through Horizon 2020 or the EU Second Health Programme (Active and Healthy Ageing), could expand access to data and research capabilities.

Concluding statement

The research field of 'Primary Care and Other Community-Based Clinical Subjects' is broad, and it overlaps with disciplines outside clinical general practice, including nursing, pharmacy practice, statistics and social sciences.

At present the few individual researchers are making the best of very limited resources and time. Cooperation with allied UCC departments for research grants is a sensible strategy, but more investment is needed by the University to provide infrastructure for the Department. A wider range of skills beyond general medicine are needed for research to be developed at an internationally competitive level.

The research activity of the Department demonstrates significance to the discipline and rigour to a fair standard.

Panel B: Paediatrics and Child Health**Introduction**

The Department of Paediatrics and Child Health at UCC is a rather small unit, with 1.5 FTE Professors, 0.27 Scale 2 Professor, 1.0 FTE Senior Lecturer and two FTE lecturers. The unit also has one FTE Clinical Professor (HSE) and one FTE dedicated administrator.

In 2005, a Professor and Department head was recruited and the research activity has thereafter been built up.

The research infrastructure consists of "The Children's Discovery Centre" (funded by HRB), a hospital based facility in use for multidisciplinary follow-up studies of children, and a multidisciplinary research centre (INFANT) that was established in 2013. Three researchers of the Department act as PI within the INFANT centre, which is clearly dependent on the two lead researchers (in obstetrics and neurophysiology, respectively). The hospital provides, within the paediatric area, space

for teaching, clinical research (especially food allergy testing) and for neonatal research, and working space for MD/PhD students.

The Department has participated in several international treatment trials (many EU-funded). Members of the Panel B visited both the hospital for discussions with the chair of the Department and the INFANT centre, and had the opportunity to discuss with PhD students.

The Department has two strong research areas, focused on (food) allergy and neurophysiology (applied in neonatology including new methodology for automatic analyses). Further, clinical research in both neonatology and paediatrics has increased during the assessment period including cardiovascular studies and evaluations of medical technology of brain injury in hypoxic-ischemic encephalopathy.

In addition, disparate studies in several areas are ongoing, so far resulting in a few publications. This activity weakens the focus of the reported overall productivity, but if encouraged, e.g. the present clinical research activity in neonatal resuscitation and multicentre studies, should result in high-impact publications.

The lecturers responsible for teaching undergraduates are clinicians with no dedicated time for research explaining their meagre productivity.

RAI 1 – Selected published output

The five publications chosen by each of the staff are of a very variable quality, from articles with excellent novel scientific value to abstracts of scientific meetings or summary of lectures.

The external evaluators have scored the five selected publications of each staff resulting in an average of 19% considered to be excellent, 29% considered to be very good, and 31% considered to be good. The selected published output of the Department has been demonstrated to be of a good standard.

RAI 2 – Total published output

The external evaluators considered the total published output to be good or very good. In particular the articles concerning food allergy are of high quality and have been published in high-impact journals. The researcher has a high reputation and is a leading scientist in the field and thus highly cited (according to Web of Science more than 5300 citations with an H-index of 37). The total published output of the Department has been demonstrated to be of a good standard.

RAI 3 – Peer esteem

The research activity indicator RAI 3 concerning peer esteem varies considerably between the different staff members. The external evaluators and the Panel considered the Department peer esteem to be very good. The peer esteem activity of the Department has been demonstrated to be of a very good standard.

RAI 4 – Research-related activity

Within the unit the four Professors (1.77 FTE, 1 Clinical) and the Senior Lecturer have extensive research-related activities. The Panel appreciates that the unit has recruited a “B-category” young scientist with international collaboration and trans-disciplinary interaction already resulting in very good publications.

The two most productive researchers are both involved in seminar series and lectures in UCC, and are frequently invited lecturers to international meetings. There is clear evidence that they are engaged in disseminating their research within their profession and to the public. The research-related activity of the Department has been demonstrated to be of a good standard.

RAI 5 – Postgraduate research education

During the evaluation period, on average one doctoral thesis and 0.5 master thesis per year were completed. Simultaneously, the number of ongoing postgraduate students increased from five to 15. This increase started



from year 2010, with on average an addition of two PhD students per year at the same time as one completed, i.e. three new students were recruited per year. The number of master students did not increase implying that input was the same as output.

From the interviews, it was clear that the MD/PhD training was very structured with allocated research time and progress reviews twice a year. The time used for completing the degree was according to the plan. No obligatory courses were required from the University, but the Department had a structured plan of the content of the training. The students have regular seminars, presentations and interactions within the Department and in INFANT research centre, if affiliated to that.

In line with the goal of the university, a new structured PhD training program started from 2011/12 in the Department. The postgraduate research education activity has been demonstrated to be of a very good standard.

RAI 6 – Research income

The Department has been very successful in receiving external funding for the research activities of senior researchers (in total €11 million during the assessment period). Four of them have, as a PI for UCC partnership, a FP7-EU funded project (one participating in two projects). All of them have, in addition, considerable funding from national funds (SFI, HRB).

Especially for neurophysiology research, several SFI grants and a Wellcome Trust grant have been approved. A young research fellow has also received a SFI grant. The food allergy programme is also well funded in addition to two EU-grants, as can be expected from allocated research time and productivity. The Department is also coordinating an EU FP7 grant on blood pressure management in preterm infants.

The funding has made it possible to recruit the increasing number of PhD students.

Establishing the INFANT research centre was possible by considerable funding from SFI and industry, as well as other funds (INFANT centre funding overlaps with the €11 million reported for the Department of Paediatrics).

The Panel anticipates that the funding for the Department results in outstanding research output in the near future. The research income activity of the Department has been demonstrated to be of an excellent standard.

Areas of good practice

The two strong areas in the Department have excellent prospective to flourish in the future. The food allergy research is well established and of very high international standard. Development of an automatic algorithm for analysing EEG in newborn infants is a potential novel scientific achievement in neurophysiology.

The neonatal research activities concerning circulation (assessing and treatment of hypotension, monitoring with NIRS), newborn stabilisation and development of effective treatment of seizures are addressing central problems in neonatology.

The researchers have several international collaborators and participate in, and coordinate, randomised controlled trials, many funded by EU. Furthermore, networking capacity both nationally and internationally with top scientists in the field of allergy and neurophysiology is a strength.

Recommendations for future development

As the Department is small it is important to have a focused research activity. The Department should receive resources to assure continuation of the high-standard allergy research.

The function of lecturers should be revised. The Panel recommends that they have research activity included (time allocated) in their obligations for the university. With the increasing competition between universities for funding and top quality staff, UCC should consider whether research active post-docs should be recruited as lecturer for enabling a career track, promoting high-quality research output as well as research-based teaching.

Combing the ongoing neonatal research activities concerning circulation, brain function (seizures) and metabolomics may clarify new mechanisms and treatment possibilities. This approach has potential to evolve into an internationally high quality research area. The university should establish a professorship in neonatology to lead the research and guarantee time allocated for it.

The researchers should take advantage of their experience of participating in international treatment trials and strive to continue being coordinators for new trials. The university has a clinical trial unit that can provide service for this.

More interaction with perinatal research (obstetrics) especially as INFANT centre has been established and the BiHiVe and BASELINE projects are ongoing. New cohorts from the BASELINE longitudinal birth recruitment should be studied to show sustainability of the project and changes in diseases over time.

The Department is small as is the Department of Obstetrics and Gynaecology. To facilitate perinatal-paediatric research and streamline administration, the Panel suggests a combination of them to one unit: “Department of children’s and women’s health” which should function in close connection with the INFANT Centre.

Concluding statement

In conclusion, the Department has two strong research areas that are dependent on respective senior researchers. Postgraduate training is recently structured and several young students have been recruited. A postdoc program is warranted to secure the succession. High quality neonatal research is increasing, but dependent on clinicians with limited time allocated for research activity. Considering the strengths and weaknesses identified, the Department has fine possibilities to improve in the near future. The research activity of the Department demonstrates significance to the discipline and rigour to a good standard.

Panel B: Obstetrics and Gynaecology

Introduction

The Department's aim is "To contribute to reproductive health care by providing excellence in undergraduate, postgraduate teaching and research in Obstetrics and Gynaecology".

A broad range of research outputs was put forward for consideration by the Panel. The overall standard ranged from fair to international leaders in the field. Research interests of Obs. and Gyn. include:

- clinical issues relating to venous and arterial thrombosis in pregnancy
- the use of metabolomics to develop biomarkers for screening and diagnostic of pre-eclampsia, foetal growth restriction and spontaneous preterm birth
- multiple pregnancy
- perinatal asphyxia and maternal medicine
- diabetes
- Vitamin D and long-term maternal health outcomes
- prenatal and early life stress
- maternal gastrointestinal conditions
- early pregnancy loss, late miscarriage, stillbirth and neonatal death
- maternal morbidity
- perinatal mortality
- clinical audit – homebirth, perinatal mortality, maternal morbidity, Robson criteria
- pelvic floor dysfunction
- psychological and spiritual needs of bereaved parents
- autopsy – parents' attitudes and consent process
- maternal death
- models of maternity care
- maternal attitudes and experiences before, during and after pregnancy
- caesarean section
- pregnancy loss epidemiology research
- perinatal asphyxia
- suicide prevention
- functional role of PGC-1 α in modulating the deleterious placental mechanisms of pre-eclampsia through therapeutic targeting of mitochondrial antioxidant function.

RAI 1 - Selected published output

There was a small discrepancy between the scores of the external reviewers and the scores of the visiting Panel. To be considered excellent, evidence of publication in top journals such as the New England Journal of Medicine and so on would be expected. Although there are a few exceptions of very high quality, the majority of journals are of a good quality. The selected published output of the Department has been demonstrated to be of a good standard.

RAI 2 - Total published output

Overall, close to 400 publications have been produced by the Department. While a few individuals have produced an exceptionally high output, the vast majority of papers were published in "good/average" journals. The total published output of the Department has been demonstrated to be of a good standard.

RAI 3 - Peer esteem

Across the staff many examples of conference attending, journal reviewing, grant reviewing, membership of professional associations, membership of national and international committees, contributing to national and international guidelines, prizes and awards and external examining have been presented. Evidence of excellent peer esteem is restricted to a couple of individuals and overall the scholarly contributions are good and largely confined to national contributions. The National Perinatal Epidemiology Centre was established by the Health Service Executive (HSE) and UCC with a view to improving maternity services nationally: the Centre has a wholly national focus and makes significant effort to ensure that the focus is not solely on maternity units serving the large urban centres, but also on the smaller units nationally. The peer esteem activity of the Department has been demonstrated to be of a good standard.

RAI 4 - Research-related activity

The staff members all contribute to teaching to different degrees. Examples include a midwifery teaching programme in third trimester obstetric ultrasound, and facilitating the training of midwife sonographers undertaking the UCD Masters in Diagnostic Imaging and Graduate Diploma in Ultrasound. Other teaching contributions include the Postgraduate Module in Maternal Medicine and Masters in Obstetrics and Gynaecology.

A good range of media contributions, for example relating to stillbirth, have been presented. Research mentoring was adequate and international collaboration was outstanding in only a few cases.

The research-related activity of the Department has been demonstrated to be of a good standard.

RAI 5 - Postgraduate research education

There is a steady outflow of PhD and MSc students. Average contributions to both undergraduate and postgraduate education.

It is good to see that there is an annual review process for PhD students however, it varies between departments and centres. The procedure/forms for annual review should be standardised and available to download.

Post-doctoral staff are encouraged to keep a portfolio for self-reflection which is good to see but career opportunities seemed limited in progressing to permanent academic positions. This is very difficult for the Department as Government restricts promotions; it was hoped that this may improve soon.

With very busy clinical commitments the time for PIs to spend with PG students is limited, a basic scientist at Professorial/International level appointment would greatly enhance the PG environment.

The postgraduate research education activity of the Department has been demonstrated to be of a good standard.

RAI 6 – Research income

The overall income coming in to the Department is large. Given the economic climate in Ireland, the income is excellent, however, a key threat is that the income is not generated across all the staff. The research income activity of the Department has been demonstrated to be of an excellent standard.

Recommendations for future development

A key problem is attracting staff to (or return to) Cork due to financial constraints. Investing in people would raise the Department profile.

It was not clear how the reviewers' documents would be used to assist in self-reflection and personal development and this should be considered.

The process for advancement in career seemed limited and this needs addressing. The annual performance and development assessment for staff seems to be informal; there appears to be limited opportunity for development but a good system in place will be helpful for self-reflection and for when the economic climate/government restrictions improve.

There did not appear to be a clear overall focus in the overall direction of the Departmental research, which could be addressed.

Concluding statement

The staff are to be congratulated on their hard work and enthusiasm in a challenging economic environment. Despite a large income, the outputs generated are average overall, due to the wide range of output standards achieved by individual staff. These ranged from some individuals having an average of poor on their overall output to, at the other end of the spectrum, an average of outstanding on an individual's overall output. Outstanding and less productive researchers are not easily identifiable by the average score - they probably know themselves who they are, however, providing targeted support and mentoring is more difficult with this score method.

The research activity of the Department demonstrates significance to the discipline and rigour to a good standard.

Panel B: INFANT

Introduction

This report reviews the research activity within INFANT and, in particular, focuses on research returns within Panel B.

The Irish Centre for Fetal and Neonatal Translational Research (INFANT) was Ireland's first perinatal centre and established in 2013. It is thus a 'young', multidisciplinary research collaborative centre.

Its establishment was as part of an external bid to the Science Foundation of Ireland and is mainly based within the campus of UCC.

At the present time it contains 63 researchers with a diverse portfolio of funding and the total included INFANT element of shared and INFANT portion of industrial element funding is €15,105,701.

The INFANT Centre is supported by competitively awarded grant funding. This includes peer review funding from the SFI, Enterprise Ireland, the EU FP7 funds, the Wellcome Trust, Health Research Board of Ireland and other charitable sources. INFANT has also been very successful in obtaining industrial funding with partners both within Ireland and internationally.

It is within the INFANT portfolio that they have a vision statement to "become the world's leading perinatal translational research centre by 2019".

The INFANT infrastructure has allowed the establishment of research platforms to develop:

1. The INFANT bio-bank.
2. A research portfolio of issuing multiple biomarkers for screening and diagnostic tests, particularly within pre-eclampsia and in predicting neurodevelopmental outcome in babies with neuroencephalopathy.
3. Developing point of care technologies to assess and predict outcomes of new-born babies with seizures and other adverse cerebral events. This has also encompassed the development of medical devices and allowing enhanced neonatal physiological monitoring in the intensive care setting.
4. A platform of work to investigate maternal and infant nutrition. This has focused on the development of prospective longitudinal cohorts in pregnancy and in the new-born period and has focused on many areas



of nutrition but, in particular, the role of vitamin D in optimal pregnancy outcome (although this activity is not assessed under Panel B).

5. To develop and evaluate therapeutic, mainly pharmacological interventions to improve outcome in pregnancies complicated by maternal and foetal disease.
6. The development of multiple randomised controlled perinatal clinical trials to evaluate interventions and outcomes in pregnancy and new-born health.
7. To investigate the origins of adult disease in prenatal life and, in particular, the prenatal/perinatal factors that affect optimal nutrition and growth in both foetal and new-born life.

Inter and Intra-Institutional Collaboration

The INFANT structure has allowed multiple collaborations, both research and educational across Ireland, within the United Kingdom and in over a dozen partners around the world.

The programme of work has allowed an excellent platform of postgraduate education (in particular the mentoring and training of Masters and PhD students [both clinical and non-clinical]). The infrastructure for governance and research mentoring is excellent and good leadership is provided by the two lead Clinical Scientists.

There has been an excellent programme of outreach activities since 2013 which includes both public and patient educational seminars involving both traditional formats of dissemination of information (i.e. public lectures, public seminars and written articles both professional and within the press) but also they have engaged using E-technology, i.e. Facebook and Twitter to disseminate information both on the need for research and improved outcomes relating to maternal, foetal and new-born health and allowing the public to understand the funding of this work.

There have been multiple international enterprise collaborations and also the engagement of industry in terms of patenting research and also in start-up companies (i.e. Metabolomic Diagnostics) which both improve the international profile of the research undertaken and allow a potential for financial security.

The following outlines the Panel's discussion of the RAI contributions to the success of the INFANT programme. It is acknowledged that the two leading co-principal investigators of INFANT are the key protagonists in its success.

The staff members included in the INFANT collaboration are from the disciplines of Obstetrics & Gynaecology, Paediatrics, Electrical Engineering, Food & Nutritional Sciences, BIS and Anatomy.

RAI 1 - Selected published output

The selected five publications chosen by individuals are diverse in terms of impact factor (ranging from as low as 1.6 to 57). There is also variability in terms of whether the chosen publication submitted is first author, senior author or middle author.

The strongest selected publications are focused upon a small number of individuals returned within the INFANT/ Panel B group. Even for these individuals who are the most productive from a research publication perspective, the majority of the submitted journals have an impact factor of <10. This, to a point, reflects the specialist, specialty nature of the publications chosen. The selected published output of the Centre has been demonstrated to be of a very good standard.

RAI 2 - Total published output

The total publications during the research period of 2008-2014 for this group is >200 from principal investigators across the INFANT consortium. Again, the journals are diverse in terms of impact factor (but for the most part, the impact factors of all journals range from 55 to 1.6, median 4.1). There is also variability in terms of whether the chosen publication submitted is first author, senior author or middle author.

There are a large number of publications in specialist journals (mainly obstetrics and paediatric). Whilst many of these publications are journals within the highest citation index and impact factor for the specialties of paediatrics and obstetrics, few are journals of an excellent international renowned type (i.e. NEJM, Lancet, etc.). The total published output of the Centre has been demonstrated to be of a very good standard.



RAI 3 – Peer esteem

This section assesses the overall scholarly standing of the researchers returned under INFANT. Two of the principal researchers have significant international reputations and their peer esteem activity scored very highly. The peer esteem activity of others within this group returned in the assessment was less highly scored in this category.

The peer esteem activity of the Centre has been demonstrated to be of a very good standard.

RAI 4 – Research-related activity

The INFANT consortium has a high degree and excellent public engagement system. It has engaged with e-technologies and the individuals are often describing their research outputs and impacts in the public media. There are numerous research focused public engagement exercises across numerous patient group interests.

The centre has at least 30 national and international collaborations within grants. The INFANT centre itself has PIs that are working at University of Galway and RCSI.

Two individuals, in particular, support scholarly institutions and serve on both charitable bodies and governmental scientific funding bodies/Panels both within Ireland and within UK/EU.

Many of the PIs are engaged in seminar lectures, either invited, international events or within UCC or other institutions in Ireland.

The research-related activities of the Centre have been demonstrated to be of an excellent standard.

RAI 5 – Postgraduate research education

Since the establishment of INFANT, the number of postgraduate students (principally PhD) has increased. Although the total number of PhD, Masters and MD students that have graduated are modest, the total number of PhD students currently registered is high (approximately 30). There appears to be a good generic training system within INFANT and the governance structure with annual appraisal and review and mentorship appears satisfactory.

The postgraduate research education activity of the Centre has been demonstrated to be of a very good standard.

What is less clear is the opportunity for career progression within this postgraduate training system. This is partially due to Government restrictions (that may be temporary) but also the opportunity for career progression through the post-doctorate pathway to non-clinical lecturer grades. This seems particularly vulnerable in terms of gender equality and the pursuit of the Athena Swan goals.

RAI 6 – Research income

This is particularly strong in this multidisciplinary research centre. Two individuals, in particular, have secured peer-reviewed competitive funding from national

scientific bodies (i.e. SFI and HEB), from the EU (FP7 scheme) and other UK agencies such as the Wellcome Trust. The total inclusive INFANT element of shared and total INFANT portion of industrial funding appears to be €15,105,701 (at December 2014). This is highly impressive.

As well as peer-reviewed funding from scientific grant Panels, there is significant investment in research from industrial partners. This extends to a small 'Start-up Company' and also the registration of patents (many focused upon screening tests for the prediction of pre-eclampsia and preterm birth in pregnancy).

This aspect of activity demonstrates the success of this centre and by any international standard, is excellent and strong activity. The only cautionary note is that, again, the lion's share of these grants is under the research umbrella of two of the PIs.

The research income activity of the Centre has been demonstrated to be of an excellent standard.

Areas of good practice

This is a potentially very powerful research consortium. It has allowed a public/private research collaboration to develop innovative research and potential 'point of care' technologies to assess pregnancy.

The 'umbrella' of this research platform has also allowed the production of an ongoing prospective bio-bank with linkage to paediatric outcome data.

There are also excellent collaborations both nationally and internationally that will both strengthen the consortium and also potentially allow access to other funding opportunities.

These perspectives make this an excellent and strong consortium.

Recommendations for future developments

We believe that the consortium is very strong and will allow many diverse research possibilities both in reproductive and new-born health and disease.

To protect and develop further this grouping there should be consideration of:

- Increasing cross collaborative research between obstetrics and new-born health and disease (prospective long term follow-up studies using the bio-banks).
- There is a large reliance upon one or two very key productive, principal investigators. Diversity of research portfolio will reduce this risk.
- Career progression for both young and more senior clinical and non-clinical academics is essential to protect the consortium and further allow its development.
- There is a need to review the laboratory space available to the researchers within INFANT.

Concluding statement

Overall this is a very strong research consortium involving multidisciplinary health. Although 'Panel B' has focused upon research within obstetrics, gynaecology

and paediatrics there are also strong links with engineering, epidemiology and nutrition.

This centre is relatively new (being developed in 2013). It should be allowed both collective and individual focus upon research portfolios and also the possibility of limiting clinical work load of academic clinical scientists to develop a very great research opportunity.

The research activity of the centre has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel B: Overall comments

Developing research capacity

The six units considered by the Panel form a significant contribution within the School of Medicine, undertaking research at cellular, disease and population levels. There were three units with primary research focus (Gerontology, INFANT and Public Health) and three with strong clinical responsibilities as well as research (Obstetrics, Paediatrics, Primary Care). Because of the historic structures within the University, there was some overlap in the assessment between Obstetrics, Paediatrics and INFANT.

All units showed strength in undertaking research. There has been substantial progress since the University's research assessment in 2009, with substantial independent research funding, and demonstrating publication and esteem at international level. Performance in some units depended on relatively few leading researchers, and raising performance of further principal investigators is needed for sustainability.

If the University continues to appoint lecturers to only give undergraduate teaching and not require research activities of them, it would be more accurate for research review of the unit if they were not included in the unit's research active staff. A separate education/teaching quality review would be warranted.

Staff development

Recognising the limitations of the recent financial situation, and the position of universities within the public sector workforce, the process for career progress seemed unclear. This could be addressed through annual formative performance review and development assessment for staff.

UCC is advised to implement a uniform annual review for PhD students, and to set standards in progress, such as upgrading assessments and publications. Post-doctoral staff are encouraged to keep a portfolio for self-reflection. Continued support is needed in progression to principal investigator.

Assessment process

The guidelines for review by units may need to be clarified, as units provided very variable information. For example, in some staff the 5 submitted publications were not always original research articles. Some units did not provide a summary of RAI 4 data, but referred to information in IRIS. The IRIS data was very variable between individuals and collecting information from the database was not easy for the Panel.

Higher standards of recording on IRIS might be achieved if there was obligatory annual reporting by departments and research centres. The University should also investigate further the use of bibliometry indices for research review and prioritisation.

Panel B: Recommendations to the University

UCC may wish to:

Improve the scoring system for papers making those more detailed in future assessments allowing better comparison between reviewers.

Provide more consistent instructions to the units regarding the nature of publications put forward. The instructions on RAI criteria for the external reviewers may also be improved as there are occasional substantial discrepancies between reviewers. Consider how to include all (divisions of) Departments for full review.

Consider how to rate societal impact (both economically as well as societal well-being).

Consider how to avoid double counting between departments and centres in the allocation of funding and publications.

We believe that a greater role for bibliometric indicators in research reviews, both on an individual as a unit level, would be advisable as well as the presentation of SWOT analyses.

Increased focus is advisable on the dispersion of policies on scientific integrity to the level of PhD students and post-docs. This may include the initiation of an auditing process of the practice of scientific work within units.

The effects of the moratorium on the sustainability of human talent and lack of career progression at senior levels should have continuous attention. We compliment University on the attention paid to postgraduate student needs.

One may consider repositioning of units between the Panels. For example, it would have been useful to shift the School of Nursing and Midwifery in Panel C to Panel B.

Panel C Report

Units in Panel C

School of Clinical Therapies: Occupational Science and Occupational Therapy
 School of Clinical Therapies: Speech and Hearing Sciences
 University Dental School and Hospital
 Oral Health Services Research Centre (OHSRC)
 School of Nursing & Midwifery
 School of Pharmacy

Panel C members

Chair: **Dr Audrey Bowen**,
 University of Manchester
 DVC for Occupational Science and Occupational Therapy: Associate **Professor Kate Radford**,
 University of Nottingham
 DVC for Speech & Hearing Sciences:
Professor Karen Bryan,
 Sheffield Hallam University
 DVC for Dental School: **Professor Paul Speight**,
 University of Sheffield
 DVC for OHSRC: **Professor Gail Douglas**,
 University of Leeds
 DVC for Nursing: **Dr Tony Ryan**,
 University of Sheffield
 DVC for Pharmacy: **Professor Yvonne Perrie**,
 Aston University

Scope and content of the review

On 3 November 2014 the Chair attended the first site visit to UCC with the Chairs of seven other Panels. Issues discussed included the need for Panels to develop discipline specific guidelines and agree fair and transparent means of adjusting expected returns from staff with extenuating circumstances. The latter might include prolonged periods of absence or part-time working. Chairs from the UK raised awareness of the Athena Swan charter.

On appointment, the six DVCs guided and moderated the work of remote reviewers who rated submissions for RAIs 1-3. Two external reviewers reviewed each staff member's submissions. DVCs ensured reviewers had no conflicts of interest. The DVC moderated reviewers' scores paying particular attention to any areas with wide discrepancies.

DVCs themselves initially rated RAIs 4-6, based on statements submitted by UCC units and by viewing online profiles and other online sources of information.

The second site visit was attended by the Chair and five of the Panel members from 30 June - 2 July 2015 inclusive. The DVC for Nursing and Midwifery was unable to travel to Ireland for health reasons but participated fully by teleconference and email on each of the three days. Each DVC had prepared and circulated to the Panel in advance of the site visit, a draft report on the unit for which they were responsible. At the site visit the Panel agreed all marks and final reports through discussion, meetings with senior UCC staff and most helpfully through visiting the units and their staff and students. The Chair and the DVC for Pharmacy visited Nursing and Midwifery.

In two separate sessions on 2 July the Panel members gave brief verbal feedback on:

1. The process itself (to members of the Steering Committee and the Quality Promotion Unit).
2. The commendations for each unit and then overarching recommendations for the Panel to representatives from each of the six units reviewed.

Considerable time was spent examining and moderating the marks for RAIs 1-3 provided by the remote reviewers. Where two reviewers had disagreed on marks the DVC reviewed those outputs and sought the Panel's approval for their recommended final mark. A second key concern was the fair and transparent application of discipline specific norms/benchmarking. These related to RAI4-6 but also for RAIs 1 and 2 such as where units were staffed with a large proportion of early career researchers and professions that until recently do not typically have doctoral-level academic staff e.g. nursing and allied health professions. The third main issue concerned agreeing expected outputs for staff with extenuating circumstances. The Panel agreed that where more outputs had been submitted than were required (e.g. if someone submitted five for RAI1 when only required to submit two based on extenuating circumstances) the Panel would select those with the highest ratings. The Panel agreed not to use zeros for legitimately absent scores but instead to enter that person's average. The Panel considered both means and medians but the specific choice made no material difference in any of the ratings considered.

The Panel was satisfied that it had been provided with adequate information to provide a fair report. Following the second site visit, the Chair drafted the current report, which incorporates the following revised individual unit reports.

Panel C: Occupational Science and Occupational Therapy

Introduction

Occupational Science and Occupational Therapy is a small Department. It includes eight listed academic staff and one Emeritus Professor.

UCC is one of four colleges in the Republic of Ireland offering training in Occupational Therapy leading to professional registration. The 4-year occupational therapy undergraduate programme, which launched in 2003, is accredited by the Association of Occupational Therapists in Ireland (AOTI) and the World Federation of Occupational Therapists. Masters and doctoral programmes both taught and by research are also available; subsequently staff have relatively high teaching loads. The emphasis is on teaching 'underpinned by research' evidence. Several members of staff have been awarded the UCC President's Award for Excellence in Teaching.

There is evidence of a growing research culture and a clear commitment to research and research capacity development, including initiatives to engage the local clinical community, undergraduates and wider public. Part of the School's research strategy is for staff to develop collaborative networks nationally and internationally, which is evident in most OSOT staff.

RAI 1 – Selected published output

Six members of staff were included and reviewed for selected outputs (five Category A and one Category B). Two staff were excluded rather than entered as nil returns, due to the non-research nature of their post or prolonged period of absence. Each included member was required to submit five papers. One person had extenuating circumstances and so was reasonably expected to submit two papers.

A total of 27 papers were sent for review. The review Panel found some evidence of high quality work that would compare favourably with international standards. Eleven percent of outputs were considered to be excellent, 13% were considered to be very good, 26% good, 19% fair and 31% poor.

The selected published output of the Department has been demonstrated to be of a good standard.

RAI 2 – Total published output

The group collectively published 49 peer reviewed publications and delivered over 120 conference presentations in the review period (not all research). There was considerable variation in research output and research activity between staff members as might be

anticipated in a small group with a substantial teaching commitment and high proportion of early career researchers.

The number of peer reviewed outputs translates to approximately one per reviewed academic staff member per year. However, the distribution of effort is uneven; some being far more productive. Research quality reflects the relative infancy of some staff members and the grant income. Only one member of staff was judged to have a total research output at the highest international level.

Seventeen percent of the total published output was considered to be excellent, 8% very good, and 17% good. Most of the published output was rated as either fair (33%) or poor (25%). Given that all except two were identified as early career researchers within the review period, the Panel agreed that the unit's publication rate was fair.

The total published output of the Department has been demonstrated to be of a fair standard.

RAI 3 – Peer esteem

OSOT staff have a number of esteem indicators including considerable career publication output, invited plenaries at significant disciplinary conferences and honours including awards for professional practice, teaching and research. Most have at least one national Panel role, and a mixture of research and teaching committee roles at UCC. Most peer review for professional journals and national and international conferences. Several have represented the Association of Occupational Therapists in Ireland (AOTI) at both national and European meetings. This activity reflects the clinical and research expertise of the staff.

One area where experience is lacking is external examination, however, this reflects the high proportion of early career researchers.

Seventeen percent of the peer esteem activity was considered to be excellent, 17% very good, 25% good, 33% fair and 8% poor.

The peer esteem activity of the Department has been demonstrated to be of a good standard.

RAI 4 – Research-related activity

There is very good evidence of research-related activity including national and international collaboration and co-authorship of publications and research grants. Three staff who trained or worked overseas maintain international links but there is also evidence of new overseas collaborations.

Inter- and intra-university collaboration is evidenced by recent bids with institutions in Ireland and Sweden and strong links with the Institute for Social Sciences in the 21st century (ISS21), which position staff well to benefit from strategic funding applications, COST initiatives and national grants.

There is evidence of external engagement with voluntary and community organisations in the identification of

student research topics (e.g. CARL) and collaborative interdisciplinary partnerships with clinicians that support pilot work to pump prime further research in the area of Lifestyle redesign.

Other activities include specialist training provision such as Lifestyle Design Training (awarded competitive funding) which has invited further presentations and workshops across Ireland and throughout Europe and 'Research in Practice', which is intended to equip therapists working in clinical practice with the knowledge and skills required to complete practice-based research in their clinical setting. These activities engage the local practicing clinical OT community and attract new postgraduates.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 - Postgraduate research education

Postgraduate research student numbers have increased across the School of Clinical Therapies (OSOT and SHS) since the last RQR, with a total of 26 PhD/MRes students registered in the past six years - this represents a threefold increase since the previous RQR. The School now runs a Doctor of Occupational Therapy (DOccT) degree, with one student completed in the current RQR period. There has also been a dramatic increase to 11 MRes students (nine in OTOS) in the 2014-15 academic year.

Since the appointment of the current head there has been a successful drive to ensure existing staff complete their PhD. Four staff members gained a PhD in the review period and two have gone on to generate research income and supervise postgraduate research students.

There is evidence of success in obtaining prestigious clinical academic training fellowships including an HRB Research Training Fellowship, which is jointly supervised across the School of Clinical Therapies and of growing experience in research student supervision and PhD examination within OSOT. However, doctoral student supervision capacity is limited by the number of staff with a PhD.

The Occupational Science expertise and positive undergraduate experiences attract research students. The Panel spoke to postgraduate students who were complimentary about the training and support they receive in the School and from the University. Peer support is facilitated by a dedicated shared office space for research students.

The postgraduate research education of the Department has been demonstrated to be of a good standard.

RAI 6 - Research income

Two major awards totalling €536,528 were secured by the Department in the review period. These included the above-mentioned HRB Research Training Fellowship for Healthcare Professionals awarded to a PhD student (€256,528) and EU funding €280,000. Awards for three medium sized project grants totalled €93,000 and several smaller awards for student scholarships, research

training and Infrastructure grants were awarded to staff members totalling €11,000.

The total equates to approximately €17,000 per year across the review period for the six research active staff members. However, not all staff have generated income in the review period and as most are early career researchers, this is quite impressive. There was also evidence of new income since the review period.

Additional funding amounting to €298,500 was awarded to the Professor Emeritus but was not UCC income and therefore excluded. The research income activity of the Department has been demonstrated to be of a good standard.

Areas of good practice

The Panel was impressed by the progress the Department has made since the last review. It has made significant strides towards achieving the strategic objectives for Clinical Therapies, in particular those in relation to research capacity development both in University academics and the allied health professions more generally. There has been a trebling of postgraduate research student numbers and in the number of staff holding a PhD.

The Panel found evidence of a growing research culture and growing capacity for grant capture with good evidence of international collaboration in both grants and publications.

There have been a number of new developments, including courses (such as the MRes and DOccT) and clinical engagement and specialist training activities which have led to a significant increase in the numbers of postgraduate research students and created capacity for impact.

There is evidence of dedicated and effective leadership with a strategic focus on research capacity development in OSOT staff and support for early career researchers. Staff and students feel well supported and are highly motivated and very positive about their learning and teaching experiences. The teaching is to an excellent standard.

The individually tailored mentoring and support provided by the Head for early career researchers in OSOT is particularly commended.

There is evidence of a real commitment to research and clinical partnership, the delivery of specialist training, and effective community engagement. Excellence in teaching is recognised and rewarded.

OSOT staff network well with clinical staff and are well placed within UCC to benefit from pump priming and strategic development funds.

International collaboration is evident and benefits from existing established relationships with overseas colleagues and new developments.

There are some innovative research areas e.g. Lifestyle Redesign, which require further development and evaluation.

There is evidence of significant progress since the last research quality review, all full-time staff are research active. Early career researchers have demonstrated capacity development in the ability to generate research income and have been productive.

Recommendations for future development

Occupational Science and Occupational Therapy is a very small group of predominantly early career researchers. Research activity is reflected across a range of occupational therapy topics, which fit the broader theme 'wellbeing across the lifespan'. However, there are also clear areas of methodological expertise e.g. qualitative research and themes around 'ageing' and 'children'.

OSOT may wish to consider strategic alignment with College themes and how it could proactively lend its expertise both topic-specific (e.g. rehabilitation, ageing, children) and methodological to these themes to promote new collaborations and secure large grants. The contribution to research activity is not evenly distributed across the academic team. OSOT might consider ways non-research active staff can contribute.

OSOT has strong clinical links and a commitment to delivering specialist training for clinicians and engaging third sector and community stakeholders. These networking activities create opportunities for patient and public involvement (PPI) and strengthen pathways to impact. However, they are time-consuming, need to be balanced with efforts to secure further grant income and their potential impact needs to be quantified.

There is some evidence of recent large grant income and a number of smaller awards. Staff might consider positioning themselves for success by seeking representation on funding Panels.

Given the proportion of early career researchers it might be helpful to consider additional mechanisms for supporting further research capacity development and bidding activity e.g. leadership training, mentoring schemes, administrative and project management support and support for grant writing and governance. Early career researchers should explore opportunities to 'buy out' time for research and increase their capacity for research student supervision e.g. applying for postdoctoral fellowships. The Health Research Board (HRB) confirmed that it funds post-doctoral and more senior fellowships and is currently finalising its new strategic plan 2016-2020. The Panel strongly recommends that OSOT consider this route to research capacity-building.

OSOT should consider exploiting opportunities for more externally funded and match funded PhDs and creating mechanisms of support for existing staff and research students. For example formal peer support groups, protocol planning meetings, journal clubs, and statistical support clinics.

OSOT should consider ways existing HSE clinics within the School might contribute to research activity.

Now that more staff are trained to doctoral level there needs to be a concerted effort to improve the quality of outputs, preferably resulting from big grants.

Staff reported problems with research administration that had resulted in the loss of grant funding. OSOT should engage proactively with the University's research support office to ensure timely administration of funding and explore further opportunities for support.

OSOT has great potential to influence the impact for Ireland agenda. However, staff may require impact training to realise their potential.

Concluding statement

The Panel has been impressed by OSOT's overall research performance and rated it as good.

The OSOT Head has only been in post for three years. During that period, the unit has carried several long-term staff sicknesses and a heavy teaching load. Despite this resource limitation and the high proportion of early career research staff, OSOT has demonstrated considerable achievement towards the strategic research objectives for clinical therapies in the review period, trebling research students and the number of staff holding PhDs.

The achievements to date have depended heavily on the Head of OSOT personally supporting the research career development for each academic staff member, including grant writing, mentoring and back fill for teaching. This is not sustainable in the longer term. The University should consider and support more sustainable levels of staffing to ensure that research active staff can remain active, continue to develop, and support growing the numbers of doctoral students.

The OSOT Department has many positive attributes. There is evidence of a commitment to research and dedicated and effective research leadership. There is an established undergraduate occupational therapy programme underpinned by research and opportunities to attract postgraduate research students through existing research-related activities. Close working relationships between OSOT and SHS staff strengthen the capacity to attract fellowships and jointly supervise doctoral students. However, OSOT academic staff numbers are small and there is considerable commitment to teaching. Investment is needed to further enhance the research capacity of research active staff members.

Having combined the six Research Activity Indicators the Panel has rated OSOT as 'good'. This indicates an improvement since the previous Research Quality Review (2009). As OSOT and SHS were rated separately in the current review, it is difficult to make direct comparisons of the specific metrics for publications but improvements appear to be across several if not all indicators.

The research activity of the unit demonstrates significance to the discipline and rigour to a good standard.

Panel C: Speech and Hearing Sciences

Introduction

Speech and Hearing Sciences (SHS) is a very small Department which involves provision of a four-year speech and language therapy course leading to professional registration and accreditation by the Irish Association of Speech and Language Therapists. All undergraduate speech and language therapy students undertake a research project. Masters level provision, specialist advanced skills education and PhD programmes are also available. Masters level audiology provision is commencing in September 2015 following a competitive tender for audiology provision in Ireland. It should be noted that staff carry relatively large teaching loads. A clear commitment to research is evident with some significant achievements.

RAI 1 - Selected published output

SHS has achieved all eligible staff having a PhD and being research active. Outputs were reviewed from seven staff. Two staff have extenuating circumstances with one contributing two outputs and one contributing three. In addition, one member of staff is on long term sick leave. Given these staffing pressures within a small team, the outputs achieved represent a considerable achievement.

Thirty outputs were reviewed. The Panel found clear evidence of high quality work that compared favourably with international standards. Ten percent of outputs were considered to be excellent, 50% were considered to be very good, 26% were considered to be good and 7% were considered to be fair. No outputs were rated as poor. This constitutes a strong output profile.

The selected published output of the Department has been demonstrated to be of a very good standard.

RAI 2 - Total published output

Overall there were no publications rated as poor. Fourteen percent were considered to be excellent, 14% were considered to be very good, 58% good and 14% fair. SHS has achieved all eligible staff having a PhD and being research active. In addition, one member of staff is on long-term sick leave. Given these staffing pressures within a small team this is a considerable achievement.

The total published output of the Department has been demonstrated to be of a good standard.

RAI 3 - Peer esteem

A range of scholarly activities was evident. Web pages were consistently presented and up to date. Staff are regularly invited to collaborate, including high quality international collaborations. There are frequent conference presentations but publications often do not follow these. Some staff should consider their commitment to books and book chapters. Whilst these may make a scholarly contribution, they do not constitute new research or new knowledge and it may

be useful to focus on peer review outputs. It is entirely accepted that books and book chapters can contribute to research impact.

The peer esteem activity of SHS staff is held in high esteem. No peer esteem activity was rated as fair or poor. Fourteen percent was considered to be excellent, 14% very good, 72% good.

The peer esteem activity of the Department has been demonstrated to be of a good standard.

RAI 4 - Research-related activity

Overall the research-related activities are strong with much of the research internationally comparable. There is some variation across staff but the range is acceptable. The attention to development of early career researchers is very positive. PGR students are embedded within a vibrant research environment and are well supported.

There is evidence of collaboration across UCC, notably with the Institute for Social Sciences. There is further potential for relatively well resourced areas of UCC such as the Medical School to take steps to positively involve Clinical Sciences in larger grant submissions. There is considerable potential for Clinical Sciences to enhance major health focused research in terms of issues such as public and patient involvement, communication with patients, research compliance, rehabilitation and self-managed care particularly for older people.

There are also significant international collaborations for more senior staff as would be expected. There is evidence of commitment to specialist PG training provided mainly for clinicians. This reflects the Department's strong clinical links but does constitute an added claim on staff time compared to non-clinical areas.

The School gained a capital grant of €690,000 to provide high quality clinical accommodation that is run by Health Services Executive staff. This facility provides clinical placements and supervision for students, which is an asset to the Department. The clinical facilities may have further potential to be utilised as a research facility.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 - Postgraduate research education

The School of Clinical Therapies registered 26 PhD/MRes students (SHS and OSOT) in the review period and has had six completions. Some MRes students are proceeding to PhD. There are efforts to work with practice and UGs to study at PG level. In addition, two PhD students have gained externally funded fellowships to support their studies. There is clear evidence of significant development since the last RQR. There are jointly supervised students across SLT and OT and students jointly supervised with practice. There is evidence of high quality supervision and students being satisfied with their experience. PGR students have access to a range of research training modules. There is also evidence of staff gaining PhDs and going on to publish and to gain small grants, which are expected to lead to larger grants over time. In the context of allied health

professions where PGR student numbers would be expected to be relatively low, the unit was considered to be good.

The postgraduate research education of the Department has been demonstrated to be of a good standard.

RAI 6 - Research income

The School of Clinical Therapies has had eight major awards over five years to the value of €1,173,597. The Panel estimated that seven of these involve SHS staff. In addition, there are minor awards to the value of €16,000. There are also joint grants with other colleagues listed within CVs. In addition, grant bidding continues to be sustained with at least two significant applications proceeding beyond the early stages of application.

Given the staffing level in the speech and hearing sciences area and the fact that three academics are newly post-doctoral and two are early career, the level of income is more than respectable. It should be noted that internationally, grant levels would be expected to be relatively low compared to dental, pharmacy and medical disciplines.

However, the Panel has considerable concerns about sustainability going forward. Given that the junior staff effectively has the head of SHS and one further Emeritus Professor to support them this represents a very heavy research leadership loading on limited senior staff. Whilst there was clear evidence of willingness to support these staff, the University needs to be aware that there may be risks to the development of these junior staff and that there is no indication of where the next wave of research leaders for the institution will come from.

The research income activity of the Department has been demonstrated to be of a good standard.

Areas of good practice

There is evidence of significant progress in research development since the last Research Quality Review.

There is evidence of a commitment to research and effective research leadership.

Staff are very positive about the benefits of research for both themselves and for the populations that they serve.

Clinical partnership is very strong, locally, regionally and nationally. This is evidenced in terms of research informed teaching, clinicians becoming researchers through MRes and PhD programmes and research projects involving clinical partners. It should be recognised that SHS is making a contribution to research capacity building in the speech and language therapy profession, as well as in the University itself.

There is evidence of effective development of early career staff which is essential to sustain research in a small unit. There is evidence of progression from UG to PG to early career staff, and there is evidence of early career staff gaining income early in their academic careers which is very promising for their later research development.

There is evidence of investment in specialist facilities to support research. This includes clinical facilities that offer further potential to be utilised as research facilities.

There is evidence of a focus on larger grants which is to be commended, and which is starting to evidence success.

International collaboration is evident and should continue to be encouraged.

All eligible staff are research active. This includes the Head of SHS and a very active Emeritus Professor. The remaining staff are early career, relatively newly post-doc and one (of the seven submitted) does not have a substantive post. The issue of sustainability of research having reached the current level requires consideration from the College.

Recommendations for future development

Following this Research Quality Review, the Department may wish to refresh its research objectives. The Department may wish to consider strategic alignment and potential contribution of their research to the five College research themes. There appears to be considerable potential for the Department to contribute to the College research themes, but they may need to be much more assertive in promoting their value to the College's research priorities. Similarly, the College may need to consider increasing efforts to involve non-medical staff in major research initiatives.

The more recent emphasis on 'Impact for Ireland' may provide SHS with an opportunity for the value of their research to be highlighted and developed. Strong clinical links will help to facilitate this. The University might give further consideration as to how the research impact agenda can be supported, and the potential value to UCC's research reputation. Again the researchers need to be confident and assertive in promoting their contribution to research impact.

SHS should continue to shift the emphasis for PhD student funding from internally funded to externally funded students. This may be increasingly possible as the financial situation in Ireland improves. The Department is well placed to capitalise on any funding sources that may become available.

SHS could improve PhD completion levels and may need to review its recruitment strategy and the level of support provided. A formal study leave agreement for part time PhD students who are employed may assist in ensuring that employer demands are not allowed to impact negatively on study time arrangements. SHS should consider how doctoral supervision and post-doctoral support should be funded and supported in the future if sustained growth is to be continued.

SHS might consider how it will grow non-exchequer income. Potential for small numbers of non-EU students to be recruited into UG and specialist PGT areas could be explored. The Department should engage with the College and the University in building a business case for investment in research. Any subsequent income growth should be invested in sustaining core staff.

SHS and the University should consider how to sustain all lecturers and higher grade academic staff being research active. This has been achieved by the use of measures such as: use of teaching fellows, local clinicians and full time PhD students for routine teaching. All of this requires organisation and support and again SHS may need to consider and support more sustainable levels of staffing to ensure that research active staff can sustain their research development.

SHS should review expectations for staff conference attendance and publications. Conference presentations should ideally be peer-reviewed and should result in a high quality peer review publication. It may be helpful to review the application procedure for conference support to ensure that staff link conference attendance to a planned peer review publication.

SHS may need to review its advice to staff on book writing. Increasingly these are not judged to constitute “original research” in peer review exercises in science disciplines (REF in the UK and the Australian equivalent). It is difficult for a junior researcher to refuse an invitation to write a book chapter but achieving a peer-reviewed journal article may enhance their research profile much more. However, “strategic” book chapters may be helpful in enhancing research impact. The University may wish to consider its guidance on the status of books and book chapters.

The strategic move to focus on Cochrane Reviews has clearly been positive. SHS may need to be cautious about update reviews in future as these may not have the same value as the original review, particularly if the new material is limited.

The new MSc Audiology is presented as an enabler in terms of equipment and staff. SHS Department should ensure that there is a realistic plan for research enhancement to ensure that the increased teaching demands do not detract from research time. The University should review resourcing for the Speech and Hearing Sciences Department given this new and prestigious course which is the first for Ireland. There is also considerable potential for considerable ‘impact for Ireland’ in terms of audiology development to be evidenced. Current resource levels are unlikely to enable the Department to achieve its full research potential in the area of audiology.

The School Business manager should ensure that SHS is deriving maximum benefit from the available IT and specialist equipment support that UCC offers. While there was evidence of constructive engagement by the staff with research support services, SHS might be more assertive in ensuring that research support services are aware of their specific research development needs.

The University should give consideration to how research development and research leadership will be sustained and developed in the future.

Concluding statement

The Panel has been impressed by SHS’s overall research performance and rated it as good. It should be noted that selected outputs and research-related activities were scored highly indicating an upward trajectory for SHS. The unit is to be commended for the research

development achieved across the review period despite the challenges of financial austerity. The University should review the level of support available at the earliest possible opportunity.

Having combined the six Research Activity Indicators the Panel has rated SHS as good. This indicates an improvement since the previous Research Quality Review (2009). As SHS and OSOT were rated separately in the current review it is difficult to make direct comparisons of the specific metrics for publications but improvements appear to be across several if not all indicators e.g. 100% of SHS staff peer esteem activity was rated as ‘good’ or above compared to 24% of Clinical Therapies staff in 2009. The quality of published outputs has also noticeably increased: 86% of SHS outputs for RAI2 were rated as ‘good’ or above compared to 67% for Clinical Therapies in 2009.

The research activity of the unit demonstrates significance to the discipline and rigour to a good standard.

Panel C: University Dental School & Hospital

Introduction

CUDSH is one of two dental schools in the Republic of Ireland which have responsibility for delivering a clinical service, undergraduate and postgraduate education and research. The School trains up to 50 undergraduate dental students per year, 14 Dental Hygienist students per year and 40 Dental Nursing students per year as well as postgraduates including seven PhD students and four undertaking a professional doctorate (DClinDent). The School has a close relationship with the Oral Health Services Research Centre (OHSRC) and benefits from their expertise and support for research. There are some shared staff and the OHSRC support undergraduate and postgraduate teaching in the School. Twenty Category A staff and four Category B staff were submitted for review. A separate review was conducted for OHSRC.

RAI 1 – Selected published output

Twenty-four staff were reviewed for selected outputs. Each was required to submit five papers. Four staff declared extenuating circumstances as early career researchers, and were thus required to submit two papers. Of the 108 expected outputs for review, 86 papers were found, fully reviewed and scored. In five cases, no research outputs were found and a further three staff did not have five research papers. In these cases, which did not have extenuating circumstances, scores of zero were entered.

Therefore, 27 outputs (25%) were scored as zero (no papers submitted or not research). In contrast, the Panel found evidence of the highest quality work that would compare favourably with work of the highest international standards i.e. over one quarter of papers were considered to be excellent or very good - 8% excellent and 19% very good. Additionally, 26% were considered to be good, 13% fair and 8% poor. Aggregating poor and zero, 33% were poor/absent.

The selected published output of the School has been demonstrated to be of a good standard.

RAI 2 - Total published output

There was evidence of a substantial number of publications – between them the staff have published well over 600 papers, including about 250 in the review period. Of these more than 180 were deemed to be research papers – more than 25 papers per year with an average of more than one research paper per member of staff per year. Given that a number of staff recorded no data and four staff are early in their career, the remainder is publishing at a rate which is satisfactory and, in the Panel's judgement, similar or better than other schools in the UK. However, only six staff (26%) were judged to have a total research output at the highest international levels. Three (graded excellent) had published 100 or more papers overall and about 30 in the review period. Conversely, 14 staff (61%) had a total output that was judged to be only fair or poor. The number of papers from this latter group was less than 10 with very few in the review period.

Rating the overall outputs, the Panel concluded that 12.5% were excellent, 12.5% very good, 16.5% good, 21% fair and 37.5% poor. The total published output of the School has been demonstrated to be of a fair standard.

RAI 3 - Peer esteem

Overall relatively few staff engaged outside of the School at a significant national or international level. A number are involved in specialist societies or in relevant specialty training or Royal College committees, but these are often not associated with research. It was noted that a number of staff have been engaged more broadly in Irish committees, including significant leadership roles in the Irish Dental Association and the Irish Division of the International Association for Dental Research (IADR).

The peer esteem activity of four staff (16%) was judged at international levels (graded 'very good' and 'excellent'). At the highest level, one person has had a number of major positions on national and international committees, including significant engagement with the IADR, has won two IADR Distinguished Scientist Awards and has a number of prestigious national and international research collaborations. Another has also won an IADR Distinguished Scientist Award, has had many significant national and international leadership roles in research-orientated organisations and been President of the IADR.

The peer esteem activity of almost 50% of staff (11 individuals) performed at fair or good levels with evidence of fellowships, some local and national committees, awards and external examinerships. Three early career staff were noted to hold externally funded research fellowships. Two staff had no information on IRIS and were scored 0.

Overall, 8% of peer esteem activity was deemed to be excellent, 21% very good, 30% good, 8% fair and 33% poor/absent. The peer esteem activity of the School has been demonstrated to be of a good standard.

RAI 4 - Research-related activity

The School of Dentistry has clear research objectives and aspirations, which focus mainly on embedding a robust research culture and capacity building. Research is conducted under the umbrella of one group - Integrated and Applied Clinical Research - but with two themes; Clinical outcomes research and Dental materials research. The Panel would commend the objectives to focus research and to develop more translational projects. There is much synergy with the OHSRC and a number of staff of the School conduct their research in the centre and receive support for grant and project management from the centre administrative staff. This is resourced from grant overheads and provides good support for academic staff allowing them to focus on research and academic duties. However, this support is not available to researchers in the School and some early career researchers felt that more support to administer grants would be helpful.

The Panel noted a good level of activity in the form of seminars, CPD courses and journal clubs for staff and postgraduate students. There was also evidence that a research intensive culture is embedded in the undergraduate curriculum in the form of evidence-based teaching and a research-orientated literature review for senior dental students. Many staff are involved in public engagement activities or delivering CPD and postgraduate courses in their own institution and beyond. Postgraduate taught courses (Masters) involve a research component and the Panel particularly commends the recently introduced professional doctorate (DClinDent) which appears to provide a more integrated clinical and research training. The Panel noted that UCC has introduced a structured PhD programme with a selection of training modules. This is to be commended, and the Panel noted that this has been taken up by the School and was welcomed by the research students. The Panel noted that since the last review there has been a significant effort to enhance the research environment and culture in the School. The success of this is evidenced for example by appointment of new research active staff, research prizes to staff and externally funded research fellowships. The Panel was impressed by the new clinical fellows programme, which provides an integrated academic and clinical training. Two fellows have completed the programme and there are four current fellows. The Panel learnt that recruitment of clinical academic staff to Cork is difficult and this initiative was intended to provide a route for succession planning. However, in discussion with the School, the Panel learnt that there are concerns about the sustainability of these initiatives. The senior staff reported that there are few promotion or recruitment opportunities in Cork and that the two clinical fellows who have recently completed their PhDs have moved to posts in the UK.

The research-related activity of the School has been demonstrated to be of a very good standard.

RAI 5 - Postgraduate research education

There are 11 postgraduate students in the School; seven PhDs, four students on the professional doctorate programme (DClinDent) and a further five will study for the Masters in Dental Public Health from September 2015. The Panel met with PG students and heard that

they felt well supported with good facilities and easy access to necessary resources and support. Each student has two supervisors and an independent mentor. Current students have also taken advantage of UCC core training modules, which they found to be very relevant and helpful.

The Panel felt that overall the number of PG students was low and although there has been some growth this was modest. The number of PhD students per staff FTE was only 0.35; including professional doctorates the ratio would be 0.55.

Although these developments have improved the research culture of the School, there does seem to be potential for further more significant growth in PG student numbers.

The postgraduate research education activity of the School has been demonstrated to be of a fair standard.

RAI 6 – Research income

The total research income over the period was €7.2m. This equates to about €1.2m per year and to €50,000 per FTE/year (n=24). The median for dental schools in the UK is about £40,000 per FTE/year, so this income is very respectable. It was noted that 70% of the income was competitive from HRB. The Panel noted however, that the majority of the income was earned by a few individuals. Overall, most of the grant income supported work in the OHSRC with 63% of the total attributable to one PI. A further 16% was earned by a second individual and in the last two years 100% of all income was earned by this one person. The Panel is aware that one of these individuals has left the School, raising concerns about the sustainability of these levels of research grant income and the research environment as a whole. Nevertheless, in the period, the School and the OHSCR have done well.

The research income activity of the School has been demonstrated to be of a very good standard.

Areas of good practice

The School of Dentistry has made significant progress in developing a more vibrant research culture since the last review. The Panel noted that most of the Panel recommendations in the 2009 review have been positively addressed. Areas of particular note include:

- Focusing research into one overarching research group and two themes, enabling a commonality of purpose and effort.
- Development of the clinical fellows programme and of the DCLinDent programme with a strong research element. These foster a culture of integrated academic training allowing clinical trainees to be supported to develop research expertise.
- Recent recruitment of research active staff and awards of external fellowships (HRB) to support early career researcher.
- There is excellent support for PhD students through mentoring and dual supervision. The School have also engaged with the UCC core training modules and these will become compulsory all new students from 2015.

Recommendations

- The Panel noted an improvement in the research culture of the School, but felt that more could be done. A number of staff did not have IRIS profiles or any evidence of publications in the period. This suggests a lack of engagement with research or the process of the RQR. Staff should be encouraged to participate in the research and scholarly activities of the School. For the purposes of an RQR, IRIS profiles, as the key source of data, should be compulsory and these activities could be monitored through the annual staff development review programme. However, it is recognised that in a small School with a high teaching load across multiple dental specialties, not all staff can be research active. The School should use its workload allocation model and annual reviews to support staff to realise their potential in teaching or research and enable researchers to have greater protected research time for project development and PG student supervision.
- Greater collaboration between the School and OHSRC was recommended at the last review, but it is not clear how this has progressed. The success of the OHSRC in developing and conducting health services related research is clearly apparent, but it is not clear how this benefits the research culture and research-led teaching of the School as a whole. At times the two still seem to be separate structures. OHSRC has excellent administrative support for project management, but this does not benefit researchers in the School. The Panel felt it might be possible to develop a business model whereby the School and OHSRC could work together more closely for mutual benefit.
- The Panel also noted that the former director of the OHSRC was a major grant holder, but left UCC in 2013. It is not clear if OHSCR can now sustain its level of activity. The School and OHSRC have complementary areas of expertise and the Panel felt that greater synergy could further enhance clinical and translational research.
- The Panel was impressed by the efforts to develop staff and plan ahead for capacity building and retention. The clinical fellows programme was a good example of this. However, recent austerity measures have resulted in a lack of opportunities for promotion or advancement. The School needs to urgently engage with the University to explore opportunities for promotion and advancement of staff. Newly graduated clinical fellows are leaving the School, thus negating any advantage that had hoped to be gained by the 'grow our own' policy. There is a huge risk that there will be a gap in staffing when current senior staff begin to retire. Although it may be possible to maintain teaching by recruiting part time teachers, it will be very difficult to recruit research active staff or potential academic leaders. This is compounded by the current position whereby new staff are appointed to the bottom of pay scales and lack of parity with salaries overseas. The Panel learnt that some of these austerity measures may soon be relaxed, and also that opportunities may be created through non-exchequer income generation. The School should embrace opportunities as they arise, and the Panel heard of plans to grow overseas (UG) student numbers. The Panel felt that there may be similar opportunities to grow PG student numbers.

- The Panel was told that some staff found research administration to be burdensome and overly bureaucratic, with complex and unclear processes at the University centre. This applied especially to early career researchers or clinical fellows who found that they had to administer their own fellowship income. They found this burdensome and difficult. Some staff also reported a high level of bureaucracy associated with negotiation of industrial research contracts and there were reports of lost opportunities due to the long time these processes may take. Although the Panel felt that some level of administration could be a valuable learning exercise they heard that it was perceived as a real disincentive to do research. The Panel recommends that the School seek ways to provide research administrative support for research staff. This could be in collaboration with OHSRC who already have good processes in place. The School should also engage with the University to determine how they can work together more effectively to ensure that staff are fully supported and that the necessary paperwork is not so burdensome as to be a barrier to research.

Concluding statement

The Panel has been impressed by the School of Dentistry's overall research performance. Since the last review, the School of Dentistry has made significant progress in developing a robust and thriving research culture, which is enhanced by recent recruitment of research active staff and development of research active clinical academics. Overall, the Panel judged that 70% of the research activity of the unit was good or very good. Research income over the period has been good and equivalent to international standards, but has been largely supported by the OHSRC. A number of staff are performing at the highest international level but there remains a high proportion of staff whose research performance is only fair or poor. This reflected in an overall low number outputs from many staff and a low number of postgraduate research students.

Although this needs to be balanced against the demands of clinical service and teaching the Panel felt that there were opportunities to grow research activity and PG student numbers. If this were based on a carefully constructed business model, there may be the opportunity to generate further income to benefit the institution as a whole. In this respect closer collaboration with OHSRC might prove beneficial. The research activity of the School demonstrates significance to the discipline and rigour to a good standard.

Panel C: OHSRC

Introduction

The Oral Health Services Research Centre (OHSRC) is a unit which is independently funded by research income but is attached to the Cork University Dental School and Hospital (CUDSH), one of the two dental schools in the Republic of Ireland. There are 21 members of staff within the unit as listed in the January 2015 research statement with all but one, the centre director/deputy director, funded out of research income. Four members of staff

have management/administrative roles and many staff work within the centre on an ad hoc basis as required e.g. as clinical examiners for clinical studies.

As a result of being supported by research funding the centre has a relatively high turnover of staff due to the nature of time limited project funding. The unit has experienced a number of significant changes in staffing at the director/deputy director level in particular within the latter stages of the review period. In 2013, there was a change of director of the OHSRC due to leave of absence from October 2013 of the previous director and the deputy director of the OHSRC was seconded to the OHSRC in July 2014 with commitments outside of higher education prior to this point.

The OHSRC contributes to teaching as well as research and performs a number of duties related to improving oral health of the population such as guideline development.

RAI 1 - Selected published output

Twelve staff were reviewed for selected outputs. There were a total of 60 outputs reviewed and, taking into account reductions in the required number of papers for those with extenuating circumstances, the best 47 papers were considered. Amongst these publications, the Panel assessed that a large proportion of these were of a standard which would compare favourably with work of the highest international level.

It was noted that some of the publications for Early Career Workers were externally reviewed but not included in the analysis because the reduced number of papers required for these individuals were of lesser quality. Staff and students reported a tension between producing a reduced number of high quality publications versus the need to be seen to be productive in terms of total numbers of publications in order to meet expectations for progress to the next step of their career pathway. Where possible, focus should continue on attempting to publish outputs of the highest quality.

Sixty-four percent of papers were considered to be very good or excellent - 28% excellent and 36% very good. A further 32% were considered to be good and 4% were fair.

The selected published output of the Centre has been demonstrated to be of a very good standard.

RAI 2 - Total published output

Overall output in terms of peer reviewed journal articles within the review period was significant with in excess of 170 publications between 2008-14, one individual having published over 100 peer reviewed articles in this period. External reviews were available for only 10 of the 12 staff. Seventy percent of the staff were judged to have a total research output at the highest international levels: 40% excellent and 30% very good. A further 30% of total output was judged to be good.

The total published output of the Centre has been demonstrated to be of a very good standard.

RAI 3 – Peer esteem

External reviews were available for 10 members of staff on peer esteem. The ratings of the Panel indicate that the OHSRC staff meet high standards in this indicator, with the peer esteem activity of 60% of the staff (six individuals) judged to perform at the top level of standards (very good or excellent); three of these (30%) at the highest international level (excellent). If zeros were entered for the two missing staff, the overall grading remains unchanged as 6/12 (50%) would be considered excellent or very good.

There was additional evidence for some category C staff that suggests good levels of peer esteem in relation to invitations to contribute to an expert advisory group on mouthrinsing, book chapters and the award of prizes from the British Association for the Study of Community Dentistry and GSK Sensodyne Dentist of the Year award. Industrial sponsorship of research is evident in the OHSRC and this is suggestive of the esteem in which the Centre is held for their research quality and efficiency.

It was noted that travel grants for Early Career Workers had previously been available which helped to facilitate networking and dissemination of research. As these are no longer available this may impact on the potential for Early Career Workers and other staff to increase their visibility worldwide and therefore reduce potential for esteem.

The overall profile for peer esteem was: 30% excellent, 30% very good, 10% good, 20% fair and 10% poor.

The peer esteem activity of the Centre has been demonstrated to be of a very good standard.

RAI 4 – Research-related activity

A number of OHSRC staff have an international profile in relation to expert advice and testimony demonstrating the international renown of the centre, particularly in relation epidemiology, fluoride related outcomes and measurement of tooth surface loss. There is evidence that two senior staff are sought after for their expertise worldwide. This is an area perhaps where there could be further investment in ensuring that expertise continues to be developed in the other staff to widen the potential impact of the OHSRC.

It is notable that there is a supportive environment in the OHSRC for early career researchers, there being a mentoring programme in place since 2010 particularly for these individuals. This is reflected in good completion rates for PhD projects. The OHSRC has a moderate level of activity in the form of MDPH seminars/CPD for staff and students as well as dentists in the region. The OHSRC report dated January 2015 also notes that research support at the university level is more accessible now than previously. There was evidence too that the research culture within the centre contributes to the undergraduate dental teaching in a number of different forms in years 1, 2 and 4.

Inter- and intra-institutional collaboration as stated in the RAI 4 submission is relatively limited but further evidence is found in other review documentation which is suggestive of a good culture of collaboration. Outside of the UCC collaborations include those with the Cochrane

Oral Health Group, the World Health Organisation, research partnerships within the EU (ADOVCATE study) and significant industrial partnerships such as those with IvoClar Vivident. The Centre also appears to maximise benefits within the university through collaboration with Mathematical sciences, Computer science, Health Economics and Pharmacy.

The IADR Unilever Social Entrepreneur Approach to Change Oral Health Behaviour is a prestigious award and part of a number of activities in the Centre focused on public engagement. In this area there is also evidence of outreach activities aimed at improving oral health of the population which may not be related to research activity but may have impact on the public and dental profession through guideline development and information dissemination.

The research-related activity of the Centre has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

The Panel noted that there are currently four PhD students in the OHSRC, with a further four students who completed their PhDs in the period of the review. A further 10 students completed the MDPH in the review period with a projected intake of five students in 2015. The list of projects, students and supervisors does not provide a note of which were PhD and which were MDPH but it is of note that the majority of the projects have been supervised by a small number of the academic staff.

Support for postgraduate students is evidenced through the mentoring programme mentioned previously as well as access to the STEPS module, short lecture series and personal development courses. Monthly journal club meetings and attendance at scientific meetings suggest a supportive environment to maintain research culture. Feedback from the students themselves was incredibly positive about their experiences of studying in the Dental School and OHSRC environment. Positives which were highlighted included the opportunity of working within a multidisciplinary environment with excellent statistical and health economics support and a feeling of being very integrated within the Centre.

The postgraduate research education activity of the Centre has been demonstrated to be of a good standard.

RAI 6 – Research income

The total research income over the period was in excess of €6m. This equates to about €1.2m per year and to €100,000 per FTE/year (n=12) which is excellent in comparison to the median for dental schools in the UK which is about £40,000 per FTE/year. As noted for the School of Dentistry review, the majority of the income was earned by a few individuals. Overall, in excess of 80% of the total was earned by one PI. There is good evidence of support for research through industrial sponsorship as previously noted, which is a measure of esteem they hold for the Centre.

In addition to the research income, there has been a further success in attracting a large EU Horizon 2020 award of around €6m, led by the University of Leeds and in partnership with seven other countries across the EU.

In discussion with the staff and students of the OHSRC it was also clear that project management support was excellent. The project management and administration support offered by two staff clearly takes some of the burden of these activities from the academic staff in the OHSRC. The posts are supported from overheads from grant income and this appears to be a good use of resources, freeing up academic staff for other duties. This would seem to be an area of good practice which may address some of the issues raised by the School of Dentistry research students (clinical fellows) who reported to feel that the administrative and management duties of being a principal investigator were difficult to manage along with their other duties.

The research income activity of the Centre has been demonstrated to be of an excellent standard.

Areas of good practice

The OHSRC has a number of areas of good practice which include:

- high levels of research income which include sponsorship from industrial partners and a recent collaboration which has led to a successful EU Horizon 2020 award of €6m;
- a strong multidisciplinary research culture which feeds into teaching at both undergraduate and postgraduate level teaching;
- a mentoring scheme for early career researchers and a strong track record of expertise in epidemiology and fluoride measurement in particular;
- infrastructure by way of dedicated staff which supports project management and administration within the Centre.

Recommendations for future development

The demonstrable success of the OHSRC over the review period is evident, however, a number of key individuals are linked with the majority of the metrics which demonstrate success such as publication records and research income.

- Succession planning should be a key focus in the next period of review. The Centre already appears to be taking steps to develop its staffing at all levels to help to ensure sustainability of the Centre and this should be the key area of attention for future development in order to ensure that the Centre is not vulnerable.

The Panel noted that there is difficulty in attracting high calibre candidates and potentially retaining students with good potential due to national issues related to the appointment of staffing at the bottom of the salary scale for each grade of appointment. This is reported to be having the effect of draining talent generally in Ireland.

- Dental Public Health should be considered as a priority area for Clinical Fellowship appointments in order to develop individuals of a high calibre.

The Panel noted that OHSRC staff were highly motivated and enthusiastic which has translated into success across most of the areas of review. In discussion however, it was noted that due to the nature of funding of the Centre being from research grants there was a great deal of pressure on staff to achieve a constant high level of income. As a consequence, staff reported working

exceptional numbers of hours at times and many staff were kept on short term contracts repeatedly with a consequent feeling of uncertainty and anxiety.

- There was a plea for a source of University funding (to smooth out the peaks and troughs in funding) to assist the Centre at times when research income was lower in order that experienced staff could be retained more easily until the next peak in research income.

Concluding statement

Against a background of austerity in the country and significant change in the leadership of the Centre itself within the review period the Panel commends the Centre on the research income in particular which has been impressive. The most recent success, partnership in an EU Horizon 2020 bid worth €6 million, is a good example of the ambition of the Centre and the esteem in which they are held internationally.

Students were particularly complimentary about the research environment of the OHSRC, commenting on how integrated and well supported they feel within this strong interdisciplinary setting. There are many areas of excellence within the Centre and the key focus for the coming years should be on succession planning and ensuring the sustainability of the unit through the development of high calibre students in particular with a clearly identified career pathway.

The research activity of the centre has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel C: Nursing & Midwifery

Introduction

The School of Nursing & Midwifery (SONM) currently provides undergraduate and postgraduate nurse training and post registration education to almost 1000 students. The School is staffed by 47 academics. The academic staffing structure is extremely flat, with only two Professors and two Senior Lecturers. The remaining staff are graded as Lecturers. The Panel took this into account in the preparation of this report.

The School has a clearly developed research strategy, setting out a number of priority projects for the period 2014-17. These include a focus on: translational research; mapping current activities; capacity building; graduate education; enhancing the student experience of research.

RAI 1 – Selected published output

A total of 234 publications were rated. In some cases, outputs not deemed to be research were submitted (e.g. descriptions of educational practices), and these were rated accordingly. The Panel identified evidence of good, very good or work of international standing and 44% of output was judged in this way. Just 12% of the outputs were judged by the Panel to be either very good or of leading international standard. Overall the Panel rated

3% of the outputs as excellent, 9% as very good, 32% as good, 28% as fair, 16% as poor, and 12% as absent/ineligible.

The overall grade was inevitably diluted by the historical lack of doctoral-qualified staff, the flat staffing structure, and the high clinical teaching load of most of the staff. Given these contextual factors, the Panel considers that the current quality of activity for a relatively small group of newly research-ready staff has considerable merit.

The selected published output research activity of the School has been demonstrated to be of a fair standard.

RAI 2 - Total published output

The School published research in a range of areas, with a particularly high number of outputs in the fields of learning disability, primary care, long-term conditions, older people, public health and cancer. The Panel found that there were a large number of listed outputs (n=533) (books, book chapters and peer reviewed journal articles). Of these, 478 peer reviewed journal articles were listed, which represents around 70 peer reviewed publications per year for the review period. Six staff did not publish in peer reviewed journals during the review period. The Panel concluded that this level of activity was on a par with that of a UK School of Nursing & Midwifery. There was evidence, however, that this activity was centred on a relatively small number of staff. Fifteen staff published at least 10 peer reviewed journal articles during the review period. These fifteen staff accounted for almost three-quarters of this peer reviewed output (73%). Of these a small number (n=4) produced 25 or more outputs. More than two-thirds of staff submitted fewer than 10 publications, regarded as fair or poor by the Panel, in terms of the number of peer reviewed outputs.

The Panel made the following judgements in terms of the overall contribution to RAI2 indicating that around 2% of the total published output was rated as excellent, 21% very good, 23% good, 33% fair, 19% poor and 2% absent/ineligible.

The total published output of the School has been demonstrated to be of a fair standard.

RAI 3 - Peer esteem

A number of staff has received significant national awards or hold positions on national boards within the profession of nursing and health care. In this sense the School can demonstrate that it plays an active part in regional and national policy making bodies and has being recognised within the Republic of Ireland for the work its staff have achieved within the review period. A number of staff also contributed to review activities for journals, including international journals. There was limited evidence, however, of external standing on the international stage. Three have continued representation on a number of international advisory boards. One is a member of three editorial boards for international journals and has conducted consultancy work in Brazil and Scandinavia.

The Panel made the following judgements in terms of the overall contribution to RAI3: 2% excellent, 2% very good, 15% good, 47% fair, 30% poor and 4% none. The peer esteem activity of the School has been demonstrated to be of a fair standard.

RAI 4 - Research-related activity

The School's research is organised around five themes, work is ongoing to review the potential synergies that exist across these five themes. The School has a very active seminar programme, there is also evidence that this activity has grown during the period of the review. The programme runs around five to eight seminars during each academic year and it is notable that international speakers often present their work within the seminar programme. The School has also hosted three international conferences during the review period.

The School has outlined the existence of an International Scientific Advisory Group as part of its research-related activities submission. The group lists notable academics from around the world within its membership. Additionally, an MSc Fellowship scheme has been devised to assist in research capacity building. The scheme appears to help gifted graduates to develop their own research career under the auspices of established academic mentors. This scheme appears to have considerable merit.



There is demonstrable evidence of research collaborations within UCC and beyond, including a number of collaborations with overseas institutions. The School also collaborates with a small number of research centres which include: ASSERT; the Centre for Gerontology and Rehabilitation; Institute of Grounded Theory. In addition, the School is beginning to develop a portfolio of work in the field of public engagement, specifically in the area of mental health.

The School has taken the opportunity to highlight its capacity building activities, which include mentoring, joint supervision of PhD candidates and shared opportunities to submit grant applications. Examples of the roles undertaken by senior academics to assist in these roles are in evidence.

The research-related activity of the School has been demonstrated to be of a very good standard.

RAI 5 - Postgraduate research education

This is an area of great strength for the School. There is evidence of growth in relation to postgraduate study. During the period under review the number of PhD students has increased by 70% and Doctoral Nursing programme candidature has grown to 22 since its inception in 2011. There are currently 39 Doctoral students, a staff (with a PhD) to student ratio of 1.5. The numbers of Doctoral students completing within the review period was 17. This includes members of staff from within the School who completed during the review period. The Panel judges that huge improvement has been made during the period of review and that the School should be very proud of the work done in this area. The Panel also felt that there is capacity for modest further growth in this area. School scholarships have played a significant role in increasing the number of PhD students supported by Fellowships. Supervision of students supported through such scholarships is, however, clustered around a relatively small number of senior academic staff.

The postgraduate research education activity of the School has been demonstrated to be of a very good standard.

RAI 6 - Research income

The statement produced on behalf of the School's Research Committee rightly points to an increase in the number of grant applications submitted during the period of review. There is evidence that this is now bearing fruit. The School has generated almost €700,000 in commissioned research projects, €13,850 in external research capacity building grants, €1M in externally funded Fellowships, a number of small grants from external funding sources totalling €60,000 during the review period. This represents around €240,000 per annum. For a School of Nursing with 47 academics this is a modest amount, but given the relatively junior profile of the academic team the Panel judges this to represent a good outcome. The most productive UK nursing departments generate around £20,000 per annum, per academic. The income generated from external sources to fund Fellowships is particularly impressive. Two aspects of the School's research income are noteworthy here. Firstly, there is evidence of a shared/team approach

to proposal development and submission. Secondly, the School has experienced a growth in its research income in the past two years, with over half (€450,000) of its commissioned external funding being captured since 2013 suggesting an upward trend in grant success. Educational and Erasmus based income have been discounted here.

The research income activity of the School has been demonstrated to be of a good standard.

Areas of good practice

Areas of good practice noteworthy here are as follows:

- The School has made huge progress in relation to capacity building during the period of the review, particularly in managing to enable large numbers of staff become research-ready through Doctoral registration.
- More recently there is clear evidence that the School has sound research leadership in place and this appears to be paying dividends. The Panel concluded that overall the School has very much on an upward trajectory.
- The School has a clearly developed research strategy, setting out a number of priority projects for the period 2014-17.
- The increase in grant capture, particularly in the last two years of the review period should be commended. Added to this is the School should also be proud of its increase in the income related to Fellowships. There is evidence of senior members of staff affording the opportunity to more junior staff to collaborate in grant applications, strengthening a culture of mentorship.
- The School has increased the number of Doctoral students significantly in recent years alongside a good rate of completion during the review period. The MSc (Research) programme also provides evidence of a commitment to capacity building, a positive response to the 2009 review. The MSc (Research) is aimed at building supervisory capacity as well as potential future PhD students.
- The environment has a number of features which are commendable. In particular the development of a vibrant seminar programme has contributed to the opportunity for ECRs and international/overseas academics in being able to present work of a varied nature. There is evidence of a growing public and patient engagement culture. There is demonstrable evidence of research collaborations within UCC and beyond, including a number of collaborations with overseas institutions. The School also hosts a small number of research centres.

Recommendations for future development

- The Panel wish to communicate very clearly to the University and School that, in preparation for a future exercise of this nature, it should seriously reconsider its present inclusive approach to research and scholarly activity. The School should consider a strategy for focusing on a smaller number of research active staff, providing them with the resources and time to undertake the kind of high quality work which they already undertake. This might be achieved through internal processes such as workload planning and/or appraisal mechanisms.

- The School needs to further develop a culture which is able to make clear distinction between high quality research and scholarly activity which contributes to the practice of nursing and nurse education.
- Whilst research leadership is apparent, this review has demonstrated that there is scope for further sharing of this role and it is important that the School is resourced with sufficient senior staff in order to achieve this. The Panel is pleased to hear that the School has made progress towards the appointment to senior academic positions and would further support future appointments at senior grades.

Concluding statement

Having considered the metrics against the contextual factors (the achievements of recent years, historical lack of doctoral-trained staff, flat staffing profile, heavy clinical teaching load), and based on the academic judgement of the Panel, the Panel believes that the research activity of the School demonstrates significance to the discipline and rigour to a good standard.

Panel C: Pharmacy

Introduction

The School of Pharmacy (SOP) has been running since 2003 and is a small School (13.5 FTE academics, seven support staff) with a staff profile of three Professors, two Senior Lecturers and 8.5 lecturers. This reflects the profile SOP and is a result of the financial climate over the last few years within Ireland and the restrictions put in place regarding staffing and promotions. Due to a new collaboration with Futures University in Egypt, there are plans to increase the staff cohort with another 3.5 FTE. As a new School they have been involved in implementing a new five-year integrated MPharm degree programme. This is not currently run in the UK, and Ireland led the way in developing this programme model. This will have taken a considerable amount of time and effort from the staff and the nature of the programme results in high teaching loads for staff (> 200 hours in some cases).

The SOP is composed of six areas: Clinical Pharmacy (2.4 FTE UCC and 0.6 FTE local hospitals), Pharmaceuticals (4 FTE), Pharmacology (2 FTE), Pharmaceutical Chemistry (3 FTE), Biochemistry (0.5 FTE) and Microbiology (0.5 FTE). The SOP has a purpose built Pharmacy building which accommodates the analytical and biological chemistry research facility. This contains an excellent range of high-quality equipment including an industrial suite and sterile manufacturing that is aimed to attract incoming industrial partners. The Pharmacy staff has generated an impressive €31.3 million in grant income, 271 publications (12.9 citations per paper), 13 patents and one licensed technology over the period of this review.

Since the last Research Quality Review exercise in 2009, the SOP has made enhanced improvements including: all staff had been active in applying for research funding and increased research collaborations. They have developed clear themes and collaborations internally and externally. The Clinical practice group has developed their research and secured funding. Further investment

in research facilities (animal house) has also been made. Included in their research strategy was to increase the critical mass in the staff, however, due to government funding this has not been possible.

Within this review, 16 members of staff were reviewed for RAI 1 (six members of staff were reviewed by remote reviewers in other areas and their scores were transferred to pharmacy and considered within this report).

RAI 1 - Selected published output

Sixteen staff and a total of 158 outputs were considered. Reductions in the required number of papers for those with extenuating circumstances were taken into account. Amongst these publications, the Panel assessed that a large proportion of these were of a standard which would compare favourably with work of the highest international level. This is a strong performance for the team and, in discussions with the staff, it was clear they have been strongly committed to disseminating their research. It was also noted that staff are collaborating well both internally and externally.

Fifty-five percent of papers (43) were considered to be excellent or very good, with 17% excellent and 38% very good. A further 35% were considered to be good and 10% fair.

The selected published output of the School has been demonstrated to be of a very good standard.

RAI 2 - Total published output

Since 2008 the research output of SOP has grown with 271 papers and 13 patents being published. These have been cited ~3500 times, with an average citation per item of 12.9, and an h-index of 30 which is excellent. Looking at individual profiles, the review Panel made the following judgements in terms of the overall contribution to RAI2 indicating that around 54% were judged to have made a contribution which is of international standing/very good. This reflects a strong growing team that has effective role-models within the team that can continue to develop and build with continued resource support. The overall profile for total published output was: 27% excellent, 27% very good, 26% good, 13% good and 7% fair.

The total published output of the School has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

Across their submission it is clear there are a range of research collaborations and clusters being developed that include UCC staff which is a good indicator of peer esteem. These include leading research groups worldwide (e.g. Harvard, Stanford, Oxford, Rutgers). Again an h-index of 30 can also be taken as a strong marker of peer esteem.

The Panel felt that the profile for RAI 3 is similar to RAI 2 with 53% of peer activity being rated as very good or excellent. There is very good engagement of the staff with refereeing/editing journals. Staff are on 17 editorial boards, professional bodies (e.g. Pharmaceutical Society of Ireland, Health Products Regulatory Authority),

research societies (e.g. Pharmaceutical Sciences World Congress and the Controlled Release Society), external examining, honours and invited plenary presentations at national and international conferences.

The overall profile for peer esteem was: 20% excellent, 33% very good, 27% good, 13% fair and 7% poor.

The peer esteem activity of the School has been demonstrated to be of a very good standard.

RAI 4 - Research-related activity

The SOP has an active seminar series, this was confirmed with discussions with PhD students and staff with students noting how useful these were for enhancing and building their network both internally and externally and included meeting up with Alumni from the research group.

In terms of research-focused public engagement/ outreach, 'Science for All' sessions are held annually with SOP staff presenting at these sessions. The SOP also prepares an annual research newsletter which is very useful at promoting engagement with a wide range of stakeholders.

The specialist training provision provided by the SOP is to be highly commended, they have excellent facilities and their engagement with the pharmaceutical industry allows them to both support industry and also enhance and develop the skills and training they provide. The research space they can offer to support smaller start-up companies, or companies looking to undertake small projects, is an excellent idea and is mutually very beneficial.

The SOP is strong in national and international collaboration externally and intra-institutional collaboration. This is measured by a number of SOP staff holding key roles within the UCC Centres of Excellence and being involved in two SFI research funding bids. Equally internal collaborations have resulted in 36 publications and three patents. The patents show a strong drive for translational research. Given the scope of pharmacy research, staff within SOP is very well placed to provide and support collaborations. This is also evidenced by the PMTC which is an industry led research centre. The international collaboration was also nicely evidenced within the research report provided by Pharmacy which shows a truly global network.

The research mentoring going across the team is strong, this is evidenced by both discussions with staff and the research outputs and development of staff. In discussions with staff, it is clear there is a strong and cohesive team working together in a very synergistic manner.

There is also clear evidence of research-led teaching, with undergraduates having the opportunity to contribute to research in the later parts of their studies. Where possible, staff teach topics related to their particular research area so they include the most recent developments in this area.

The impact statements included in the SOP report are very useful, high-lighting the trans-disciplinary nature of the research being developed in this group.

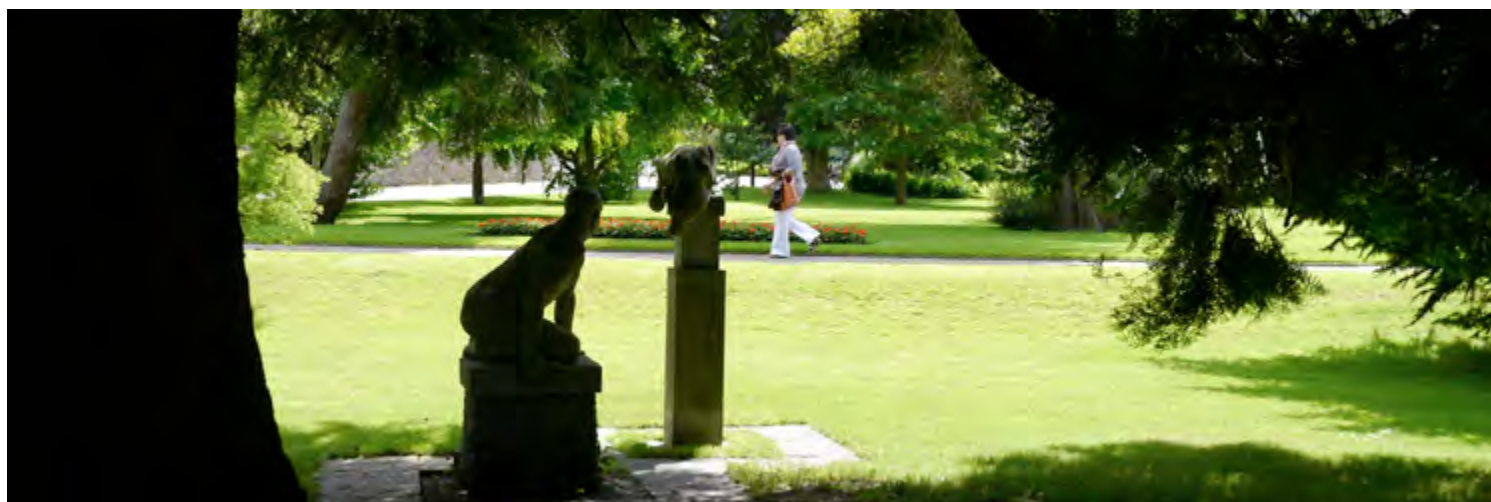
The research-related activity of the School has been demonstrated to be of an excellent standard.

RAI 5 - Postgraduate research education

The total number of postgraduate students supervised by SOP PIs within the 2008-2014 period was sixty PhD students, six MSc (Research). The SOP has a robust PG progression programme. Given the staff cohort this is very commendable. The completion rates for these students are excellent and there is excellent progression for these graduates into full-time posts upon graduation, as evidenced in the supplied appendices. From the data it looks like nearly all, if not all students are funded positions.

In the PhD student meeting there was a strong theme of the students expressing strong satisfaction in their training programme. They were very complementary about the level of supervision provided and in the structured training programme. The students were able to describe the requirements and processes in the training programme in detail and it was clear they were both fully aware of the process and comfortable with it. This demonstrates strong engagement from the student cohort. They also worked well across the group as there were students from all areas of research within pharmacy but all sharing a similarly high level of satisfaction.

The SOP has excellent facilities for research that are very well maintained by the skilled technical team, the students also recognised the high quality facilities they had on offer.



A particularly positive aspect of the PG training is the option of placements within Industry that was seen to be available to a large body of students, not just those funded on Industry PhDs and there was strong uptake for these as it was recognised to translate into strong employability options. This is highly commendable.

The postgraduate research education activity of the School has been demonstrated to be of an excellent standard.

RAI 6 – Research income

The SOP report €31 million in research income from 2008-present, much of this is through collaborative networks. There is a good spread of income with the main funding coming from SFI and HEA. It is not clear how many staff this is, but if taken as the full group of 16 academics, this averages more than €270,000 per year per academic, which is excellent.

The research income activity of the School has been demonstrated to be of an excellent standard.

Areas of good practice

The research report and supporting evidence provided by SOP and the level of data provided was excellent. Key highlights coming out of the report were the quality of PG training and their progression into employment. Continued links with Alumni is a key network. The PhD students are clearly a strong and cohesive group. They spoke highly of their experience and the staff should be commended for their support and research development of this group. In the staff meeting, there was a very positive and open atmosphere, it is clear they work as a team and work within a very supportive structure. The team is highly committed and this has translated into high quality research outputs. The research facilities are excellent and are maintained by strong technical support, this is vital given the high level of advanced research facilities.

Recommendations for future development

For the external reviewers, the link between the information we were given and the information on the website initially did not always match, so it is worth reviewing the website.

Staff workloads are high and it is difficult to see how further growth can be maintained. Given the success of this group, it is recommended to continue to build this group to enhance the critical mass and allow economies of scale in both teaching and research. The proposed enhancement of the team with a Chair in Pharmacoconomics would further build this team. Also consideration of the career progression of staff is needed. The financial regulations that were put in place in Ireland are beyond UCC control; however, there remains a risk of losing staff to competitors across the Pharmacy sector.

Concluding statement

The Panel has been highly impressed by the School of Pharmacy's overall research performance and rated it as

very good and bordering on excellent.

The contribution of SOP to UCC and the pharmacy research community is notable. The SOP has shown continued growth and excellent performance in their research quality. Particular strengths are seen in their research environment, their PG education and training and their strong income generation. Publications outputs were also very strong and continued mentorship for new staff will help further enhance this area.

The research activity of the School has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel C: Overall comments

Panel C is comprised of six units. All six were rated individually although slight differences in how they are configured are described below. As only single integer scores were allowed this time, caution is advised when comparing performance of three units (School of Dentistry, OHSRC, School of Pharmacy) to the 2009 Review. Two units have clearly improved (OTOS, SHS) and the others have at least maintained their scores although SONM is at the low end of 'good' and SOP is at the upper end of 'very good'. The Panel was impressed with this overall rising profile especially given the effects of national austerity measures and congratulates the units for their achievements.

The Schools of Nursing and Midwifery and Pharmacy are standalone units and achieved an Overall Research Evaluation (ORE) rating of 'good' and 'very good' respectively. This compares to ratings of 'good' and 'good to very good' in the 2009 Review, suggesting Nursing and Midwifery has maintained its 'good' (albeit a borderline score at the low end) and Pharmacy achieved a strong 'very good' (bordering on excellent).

The School of Dentistry and the Oral Health Sciences Research Centre were rated individually this time as 'good' and 'very good' respectively. Compared to the 2009 Review, this suggests that the School of Dentistry is now a definite 'good' and OHSRC a definite 'very good'. Many of the OHSRC staff contributed to the Dentistry score.

Occupational Science and Occupational Therapy and Speech and Hearing Sciences were rated individually this time and both achieved a rating of 'good'. When combined, the ORE for the School of Clinical Therapies is also 'good', which represents an improvement from 'fair' to 'good' since the 2009 Review when the School of Clinical Therapies was rated as 'fair'.

Overall comments and conclusions at Panel level

Across all six disciplines, the Panel was impressed by the quality of overall research activity, which ranged from good to very good. Additionally, at least two units had improved since the 2009 Review. This was especially noted given the following two contextual factors:

1. National austerity measures, the resulting financial

constraints faced by the University and the evident reduction, or at best stagnation, of staffing levels in the units over the period under review.

2. Maintaining a high standard in teaching across the units (e.g. several members of OSOT have been awarded UCC President's Award for Excellence in Teaching) including several newly developed programmes, some of which are unique to UCC across Ireland (e.g. MSc Audiology in SHS) and across the British Isles (e.g. MPharm in SOP).

The Panel also noted different strengths between units, where some (e.g. OHSRC and SOP) excelled at RAI 6 (income) and others (e.g. Nursing and Midwifery and SOP) were strongest in RAI 5 (PGR). This appropriately reflected the differing starting positions where some disciplines have a tradition of entry level doctorally trained lecturers (e.g. Pharmacy) and others have to invest time growing their own (e.g. Nursing and Midwifery, Clinical Therapies). The Panel felt confident that these were wise capacity-building investments by the units that will benefit the institution in the near future.

Postgraduate research is very strong within these units. It is provided flexibly through a variety of routes resulting in an interestingly mix of PGT and PGR students who spoke positively of their experience e.g. opportunities for developing your existing staff but also for attracting more traditional full-time PhD students.

Dentistry was particularly weak in PGR ('fair') but strong ('very good') on income and RAI 4 (Research-related activities). PGR was also OHSRC's weakest area ('good'), whereas it scored above this level in all five other indicators. With the one exception for OHSRC, publications (RAIs 1 and 2) were the weakest areas for the other five units and are key areas to target. It is interesting to note that research income is at least at the level of 'good' across all six units with some substantial recent grants hopefully leading to international leading future publications.

The Panel commends the units and the University for managing to recruit and retain a committed, highly-motivated workforce with some examples of great leadership within these disciplines (e.g. Nursing and Midwifery and Clinical Therapies). Your dedicated workforce and some inspirational and generous leaders have created a research environment rated very highly by the Panel (RAI 4). All six units achieved at least a 'very good' in RAI 4. This should stand you in good stead when opportunities come for attracting new talent and indeed retaining those on temporary contracts.

Panel C: Recommendations to the University

First, the Panel commended the institution's vision in commissioning this review, and in the efforts made by all staff to provide us with sufficient information for us to have confidence that the results are based on a fair and thorough evaluation. We felt welcomed, enabled and enthused to perform our role.

We appreciated the steering committee's encouragement to develop and apply discipline-specific guidelines in advance of receiving the metrics and to make adjustments for expectations of outputs where staff had exceptional circumstances (e.g. extended leave or part-time working). We appreciated having the discretion to balance the objective metrics and their weightings against discipline-specific benchmarks and to use our judgement to raise an ORE, where the weighting towards publications did not accurately reflect the high quality of other research indicators given the starting point of certain disciplines. The Panel was disappointed by the move towards single integer scores for the ORE which limited comparability with the 2009 review scores.

In addition to the six sets of unit level recommendations provided above, the Panel wish to add some overarching University level recommendations:

- The Panel is greatly concerned about sustainability, particularly around future leadership in some of the smaller units. Over-dependence on single inspirational leaders is a high risk strategy and the Panel recommends proactive succession planning. The University should consider how to develop the next generation of leaders and remove the relatively flat structure that exists in several disciplines. The University should draw on examples of best practice in leadership e.g. Pharmacy and senior teams in Nursing and Clinical Therapies.
- The Panel recommends capacity-building across the units. The University should engage with units to build business cases for recruiting and retaining the best staff. The Panel was aware of current funding successes for PhDs and impressive progress with growth in the levels of doctorally trained staff too. The University should support units to prepare postdoctoral and higher level funding bids especially in view of the HRB's imminent new strategic plan 2016-2020. Strategically the University should lobby for improved postdoctoral career pathways and more postdoctoral funding opportunities.
- With the aim of increasing the number of publications rated as excellent, the University should consult with departments to identify their research support needs, to agree priorities and to encourage a two-way flow of information such that departments promote themselves more to increase their visibility to college and align themselves to the College and University research themes.
- Across this Panel we saw great potential to develop the impact agenda and enhance the University's reputation. The University needs to raise awareness of Impact for Ireland (some departments seemed unaware of it). The Panel recommends the University provides introductory level training around the meaning, means and value of impact, creates impact champions and a University impact lead.

Panel D Report

Units in Panel D

Anatomy & Neuroscience
 Biochemistry
 Food & Nutritional Sciences
 Microbiology
 Pharmacology & Therapeutics
 Physiology

Panel D members

Chair: **Professor Kay Marshall**,
 University of Manchester
 DVC for Anatomy & Neuroscience:
Professor Gareth Leng, University of Edinburgh
 DVC for Biochemistry: **Professor Paula Booth**,
 Kings College London
 DVC for Food & Nutritional Sciences:
Dr Jules Griffin, MRC Human Nutrition Research, UK
 DVC for Microbiology: **Professor Ian Henderson**,
 University of Birmingham
 DVC for Pharmacology & Therapeutics:
Professor Stephen Ward, University of Bath
 DVC for Physiology: **Professor David Thwaites**,
 Newcastle University

Scope and context of the review

The Chair of Panel D visited UCC on 9 October 2014 to attend an initial briefing on the RQR process which included: an 'Introduction to the Research Quality Review' at University College Cork: its purpose and objectives led by Professor Paul Giller; a detailed discussion of the guidelines led by Professor Patrick O'Donovan; briefing on the roles of the Chairs and Disciplinary Vice Chairs (Professor Alan Dobson); scoring process (Professor Graham Allen) and meetings with College Heads, Professor Anita Maguire and the President. The Chairs then worked with UCC on the appointment of Disciplinary Vice Chairs, a process that was completed by November 2014. Thereafter, the Panel corresponded with respect to agreeing disciplinary norms, with particular focus on agreeing the scoring system for outputs, calibrating scores from remote reviewers (two reviewers selected per output) and resolution of differences. The Panel raised other questions which were all answered by UCC and we were provided with comparator data in the form of the last RQR report from 2009. Remote reviewers were

appointed by UCC and they completed their task by April 2015, these reviewers were responsible for scoring RAI 1 (selected publications), RAI 2 (total published output) and RAI 3 (peer esteem). However, there was no calibration exercise between the previous exercise and the current one or between Panels.

At the first private meeting of the Panel a number of potential 'themes' were decided that would be helpful to discuss with staff during our different Departmental/School meetings. These themes arose from the presentations made by the UCC senior team and as a result of the experience of the Panel members particularly with respect to managing the tensions between teaching and research.

During the visit the Panel had time for private meetings and outcomes of the Department/School visits were discussed and these, along with the metrics, formed the basis for the recommendations made in this report and the conclusions made by the Panel.

Panel D: Anatomy & Neuroscience

Introduction

This is a relatively small Department, with much of its research activity recently relocated to the Western Gateway Building where its new FLAME teaching laboratory complex is also located.

The Department has ten permanent and/or fixed-term staff, of which nine are research active. The Head has changed the focus of the original Anatomy Department onto Neuroscience, and this focus impacts on the teaching portfolio as well as appropriately reflecting research focus. The Department has access to diverse core research facilities, and has led the development of an imaging facility. The Department's research strategy is presented as multidisciplinary and quite broad in scope. Its mission is "to develop an internationally recognised research unit in anatomical education and in the neurosciences, to advance knowledge, and to educate both students and society of the mechanisms and potential treatments for brain disorders." The paperwork supplied by the Department to explain how they were delivering this mission was assembled thoughtfully, on detailed interrogation can be taken as a full and true

reflection of the present state of the Department, and contains clear markers of success that deserve explicit commendation. That documentation also reveals certain areas that should be of concern to the College, and which appear to demand a firm and constructive response from College.

Most of the core funding to the Department comes from its contribution to preclinical teaching in Medicine, and with what seems to be quite extensive delivery of service teaching in areas allied to Medicine. This teaching is time- and resource-intensive, and the staff:student ratio of 24.5:1 seems rather high to sustain excellence in both research and teaching. The estimated split of academic staff time between teaching (38%), administration (30%) and research (32%) is revealing. On the face of it the administrative load seems very high, and the proportion of time available for research rather low to sustain a strong research output. The staff appears to manage their delivery of teaching well but the associated administrative load is a clear problem.

The grant funding environment for research in this area is extremely competitive. Nevertheless, the Department has been very successful in dramatically increasing its research output, and the quality of that output is generally high with a strong citation rate. The Department has also been successful in winning significant resources for research in a difficult funding environment – about 12.5M euro over seven years, with a small number of large grants and many very small grants.

The Department has a very young faculty. The Head has an exceptionally strong international research profile, but the other research active staff have been very productive, producing good quality research, and are very active in both outreach and peer-to-peer dissemination through conference participation and organisation, and are building international recognition. Members make a strong contribution to community building activities in Ireland.

There is a clear understanding that, for a Department with extensive teaching commitments and a clear commitment to excellence in education, the challenge for research excellence must be to manage that teaching in a way that is consistent with a high level of research activity. This means that a focus must be on research-led teaching, on aligning the content of teaching with areas of research strength, and making teaching itself the focus of educational research, and prioritising innovation. In addition, it means continually reviewing the delivery of teaching, and evaluating its impact to ensure efficient delivery. Importantly it also means recognising the burden on academics and alleviating it by the structures and mechanisms designed to minimise the administrative load on academics.

The Department recognises all of these issues and is addressing them. However, effective solutions to some of these issues require organisational attention at a supra-departmental level. The Department has formulated ambition plans to develop and expand their research income, looking mainly to EC sources of research support. It has excellent experience in these areas and the internationalisation of its activities supports this – it is clearly important to raise the international esteem of the Department broadly to maximise effectiveness, and this needs to be led by effective internal recognition of outstanding performance.

RAI 1 – Selected published output

The research outputs submitted to the Panel were generally of high quality. In the UK REF exercise the Panel would expect that most would be ranked as 3* (internationally excellent) with between 10 and 20% ranked as 4*, with perhaps 20% of outputs at 2*. Overall, this is a strong submission on that indicator, particularly so in the context of a teaching intensive Department.

The selected published output of the Department has been demonstrated to be of a very good standard.

RAI 2 – Total published output

In terms of research output, the volume appears to be consistent with the rating given for RAI 1. The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 – Peer esteem

For peer esteem, it is more difficult. Some members of the Department have achieved very significant international esteem; generally, though the Department is very young, and these indicators tend to come with age. National measures of esteem are however excellent. An objective rating of esteem would therefore conclude that the current overall ranking is between very good and good, and perhaps closer to good – but with the important caveat that this ranking seems certain to rise perhaps markedly over the next few years. The Department is on a very clear and striking upward trajectory.

The peer esteem activity of the Department has been demonstrated to be of a good standard.

RAI 4 – Research-related activity

There is evidence of significant knowledge transfer activity through a number of interesting patents. There is an impressive volume of activity on outreach.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

The Department currently has 23 registered PhD students, four MSc students and five MD students. It has an excellent completion rate. This level of graduate student activity seems appropriate to the number of research active staff, and the support and training given to them seems excellent. The monitoring arrangements seem appropriate, and the encouragement given to students to participate in outreach is exemplary.

The Panel met with an impressive number of research students and had the opportunity to question these very extensively about their training and the environment. These students had a very clear understanding of the key skills needed for research success and could explain in detail what the Department did by way of developing those skills. It was clear that there was a strong culture with high expectations of research performance, and that students felt very well supported and mentored. The Panel

detected no areas of weakness here; on the contrary we heard a very impressive account of a coherent, diligent and supportive training environment. Some thought perhaps needs to be given to a more structured approach to skill training in some areas – such as writing skills. These are left to supervisors individually to support.

It is not clear how best practice is disseminated between Departments. It was not clear what training is given to supervisors.

Students are encouraged to take part in outreach, but the uptake of this seems patchy. Those that had participated reported clear beneficial outcomes for them in developing communication skills and confidence.

The postgraduate research education activity of the Department has been demonstrated to be of a very good standard.

RAI 6 – Research income

The Department has been successful in winning significant resources for research in a difficult funding environment – about 12.5M euro over seven years, with a small number of large grants and many very small grants. The Department has formulated ambition plans to develop and expand their research activity, looking mainly to EC sources of research support.

Understanding how the level of grant income translates in this environment is unclear to the Panel, as is the level of underpinning institutional support. On a crude cash basis, the level of research income is lower than expected in a Department in a top tier UK University, but given the actual proportion of time available for research this looks very healthy and is translated into good volume and quality of outputs. Looking at the research income in an Irish context, after gaining a clearer understanding of the funding environment, the Panel considers that the research income activity of the Department has been demonstrated to be of a very good standard.

Areas of good practice

1. The highly collaborative nature of the Department is an important element in its success.
2. Returning a high proportion of grant overheads to successful PIs seems a very healthy approach, as this type of funding seems essential to innovation and pilot studies that are necessary to feed subsequent cycles of grant success.
3. The very active policy of encouraging outreach is highly commendable.
4. The Department has been very successful in attracting good graduate students and developing them effectively.
5. The youth and vigour of the Department are very obvious, and they clearly benefit from the fact that many members of the Department have significant experience of working in diverse institutions outside Ireland. Personal development will benefit from a planned sabbatical programme, and it is excellent that the Department has plans for this.
6. The Department has a clear understanding of its development needs – of what is needed to develop the profile of the Department, to enhance its success in grant funding, and to develop the careers of individuals in the Department.

7. The technical staff are expert and committed.
8. The Departmental space is of high quality, though unfortunately not on a single site.

Recommendations for future development

The Department needs to develop international recognition of its young faculty, needs to address the burden of administration, and needs to find ways of relieving the burden of teaching – there is a clear risk of burn-out ahead.

The plans for the Department are ambitious, but not overly so. To sustain momentum, the Department needs to expand, while keeping the ethos of collegiality and co-operation.

The obvious immediate way to support development of critical mass is to begin with Departmental mergers, with the creation of a professionalised teaching organisation charged with optimising the efficiency of delivery and minimising the burden on academics, and charged with gathering objective measures of impact guided by a clearly articulated business-led mission.

Exactly what the role and composition of the School is needs review. It is not clear that it effectively supports research or teaching or administration, or that it effectively articulates a coherent College wide vision.

Concluding statement

This is a Department that is showing impressive vigour and energy across all domains, led by an internationally exceptional scientist. The level of research productivity is excellent and the quality high. Measures of international esteem are thin, except in the case of the Head, but the faculty is very young and these should come. Overall the level of activity in RAI 1 is very good and, on the evidence seen, the same holds for most of the other indicators. RAI 3 & 4 are on average weaker whilst RAI 5 & 6 are stronger than 'very good' but not yet 'excellent'.

There are opportunities but also threats implicit in the College strategy to focus on selected research themes. The threat is that this approach over time will narrow the research base, weakening opportunities for innovation and losing the flexibility to respond adroitly to newly emerging opportunities. Areas of emerging/potential strength need to be recognised and protected. One of those areas may be in what we might call neuroregeneration, with clear translational potential and a rapidly rising international profile in basic science.

It is important for the Institution to note that the way they are collecting metrics on publications and grant success may be misleading, in that they underestimate outputs for example in the area of Neuroscience because many are assigned to Centres that are not overtly in the area of Neuroscience.

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel D: Biochemistry

Introduction

The School of Biochemistry and Cell Biology is a coherent, research active unit operating at high level with regard to both teaching and research. The School visit was very helpful, albeit too short. It would have been beneficial for the Panel to spend more time within the School.

Staff are enthusiastic and motivated. Although spread across three sites, the quality of the accommodation is excellent and there are clear interactions across the School, most notably between those working at the same site. There is a very good research culture with quality seminars, good participation by staff and PhD students and representation internationally at conferences. During the site visit it appeared that teaching loads were perceived as fair across the School with excellent administrative support. The Panel gained the impression that School were generally collegiate.

Staff were unaware of any significant impact or changes to the School as a result of the findings of the previous RQR, but nonetheless found the evaluation useful. Coincidentally since the last review some of the staff had moved into new state-of-the-art laboratories. The Panel thanks the School for the extensive, informed documentation provided and for an enjoyable and interesting visit to the School.

RAI 1 - Selected published output and RAI 2 - Total published output

The published output - based on the selected publications and total number of publications in the review period - is good to excellent. Fifty-one percent of the selected published outputs were found to be very good, with 17% considered to be excellent. There are thus some excellent publications but these tend to be focused on a few staff and the quality of publications overall, across the School, could be higher. The overall research vision and ambition of the School was less clear. Nonetheless the School is to be praised for its quality fundamental research in biosciences which underpins applied research and impact. Such basic science should be highly valued.

The School should aim to raise the quality of their tail of publications. The selected published output of the School has been demonstrated to be of a good standard.

The total published output of the School has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

Peer esteem is good to very good. Staff should be encouraged to increase their international standing and esteem.

The Peer Esteem activity of the School has been demonstrated to be of a very good standard.

RAI 4 - Research-related activity

The Department is active in this area with a number of commendable activities. They have a presence on the national scene in professional bodies and funding agency committees as well as internationally through conferences, professional bodies, reviewing etc. They are also proactive in terms of inviting external speakers to and running workshops and conferences at UCC. There is an outreach programme covering a number of areas.

The research-related activity of the School has been demonstrated to be of a good standard.

RAI 5 - Postgraduate research education

The education is very good. There are a healthy number of PhD students from a variety of funding sources with good publication productivity and submission rates for the cohort. The Panel was impressed with the PhD students they met who were clearly engaged, felt part of the School, were well supervised and actively presenting work at international meetings. The School should maintain at least this level of PhD research education. There are some excellent MSc programmes and high employability.

The postgraduate research education activity of the School has been demonstrated to be of a very good standard.

RAI 6 - Research income

Funding is very good with several staff securing large awards during the period, although equally some staff have little funding. There have been significant changes to the funding situation externally and it is pleasing that the School has been able to maintain its income. However, several staff highlighted current and future issues that are very likely to mean a significant reduction in income if the same funding strategy is pursued. The previous report noted that most income was from Irish funding sources and that the School should diversify. However, there is little evidence of a broader funding base during this current review period. The need to target more funders, particularly if the School wishes to sustain its fundamental science, seems to be even more pressing than at the last review period. The School is preparing more EU applications and being creative in adapting to the Irish funding strategies, but this may not be enough.

The research income activity of the School has been demonstrated to be of a very good standard.

Areas of good practice

The School has a strong research activity and culture with excellent teaching. It performs well across the three sites and has excellent administrative support especially with regard to teaching. The PhD education and culture are also excellent.

Recommendations for future development

The School could benefit greatly from two key changes: i) being located at a single site so they can be much more efficient as well as facilitate research and a strong identity, and ii) being part of a larger School. There would be economies of scale with the latter, as well as likely advantages for collaborative research and importantly, raising their international profile.

Research in the School is rather diverse and staff are spread thinly across several research topics. A focused research strategy and scientific vision is recommended, which should build upon and coalescing their existing strengths as well as look beyond the immediate School to achieve critical mass and international standing in niche areas.

There is a need to target as many funding agencies as possible and become more adept at securing funds from those agencies outside Ireland. Staff commended the support in place to assist with EU applications and would benefit from further such initiatives from the Centre to help identify and apply to other sources.

There is a distinct issue with equipment. The School needs a considerable, well maintained equipment base. At present there is an absence of core facilities, support staff, funding arrangements and seemingly no route to replace large items. This must be addressed if the School is to maintain and increase its current research level. The School and UCC should work together to resolve this situation. Equally future funding for PhD programmes must be secured to maintain the quality education.

Concluding statement

This is a high performing School at UCC. The Panel was impressed by the staff and environment on their visit. The School has maintained its performance and rates good to very good internationally, with some areas of excellence.

The Panel found that the School of Biochemistry and Cell Biology is a coherent, research active unit operating at high level with regard to both teaching and research.

There do not seem to have been any significant impact or changes to the School as a consequence of the findings of the previous RQR.

Coincidentally, since the last review some of the staff had moved into new state-of-the-art laboratories.

Although still spread across three sites, the quality of the accommodation is excellent and there are clear interactions between research groups.

There is a very good research culture with quality seminars, good participation by staff and PhD students and representation internationally at conferences.

The published output is good to excellent. There are some excellent publications but these tend to be focused on a few staff and the quality of publications overall, across the School, could be higher.

The overall research vision and ambition was less clear. The School is to be praised for its quality fundamental research in biosciences which underpins applied research and impact and should be highly valued.

Research in the School is rather diverse and staff are spread thinly. A focused research strategy could be beneficial.

They need to target as many funding agencies as possible and become more adept at those outside Ireland.

This is a high performing School at UCC. The Panel was impressed by the staff and environment on their visit. School is generally very good internationally with some areas of excellence.

The research activity of the School has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel D: Food & Nutritional Sciences

Introduction

The School has a broad research base spanning the range of scientific activities that would be expected in a Nutrition and Food Sciences School, ranging from work on vitamins, global public health and nutrition transitions to milk composition and food packaging. In total, there were 14 category A scientists and 10 category B scientists that study cereals and beer composition, vitamin D and bone health, diet and lifestyle in children, processing and preservation of food, dairy products, food package sensors, phenolics, nutritional transitions, chemistry and biochemistry of meat, food toxicology, obesity, cancer, vitamin E, folate, nutritional surveys, phytochemicals and xenobiotics, making for a broad portfolio of research across the School. The School produces ~100 papers per year led by its 14 permanent, fixed term staff.

There are particular strengths in vitamin D and dairy across the School and the Protein 4 Food initiative is also flagged as a major achievement across the review period. It was interesting during the visit that despite many relevant interactions between food sciences and nutrition we had two distinct presentations from these different parts of the same School. The School of Food and Nutritional Sciences submitted the largest number of Category B individuals and these staff had fewer outputs. The School appears well funded, bringing in Euros 46.2 million in total staff-earned financial resource, with Euro 20-25 million from grant funding. Because of reductions in Irish government grant funding, the Department has had to diversify into a more mixed economy of grant funding, including more industry and EU funding which can only be a good thing not to be reliant on one particular area of funding. This has also led to high profile European projects such as ODIN which also enhance the standing of the School as well as bring in revenue. There are also excellent interactions with industry. However, we were surprised at how low the overhead levels were

on these grants. While individual PIs are understandably reluctant at requesting large overheads for fear of deterring a collaborator, this does mean that the School is funding business and this money could be spent elsewhere (e.g. service contracts, maternity cover) were a proportion of it to come back to the School.

The School has excellent research facilities, particularly for food processing and this presumably attracts a number of industrial collaborators. In addition, they have a mass spectrometry facility which is used for vitamin D work and milk composition. There seemed to be little in the way of central resources provided by the college for example access to omics science – indeed this seemed largely limited to an animal facility and some histology.

If the School is to increase its research impact globally the Panel feels that they need to expand their research into more interdisciplinary subjects rather than focus on some of the narrower research niches presented.

One area that seems to raise concern across the School is the need to bring in new blood to replace retirements. Over the past 10 years the School has had seven academic retirements including the Chair of Food Chemistry, Chair of Nutrition and Chair of Food Science and Technology, but they have only been allowed to recruit to two posts at a much more junior level. This is of concern as the School is set for more retirements and it will be important to bring in new junior and intermediate group leaders if it is to flourish. There is also a limit on promotions which is causing a degree of angst. Clearly a major activity is teaching and education including undergraduates, MPhils and PhD students. The School maintains two BSc programmes with 50 students each, and in addition, they also have a cohort of 20-30 Chinese BSc students. This does create obvious tensions with the need to do research as well as teach.

RAI 1 – Selected published output

There is rather a wide range of submissions in terms of publications. There are PIs who managed to submit substantial publications in high impact journals for their field for all five slots and the outputs in vitamin D metabolism were striking with one PI submitting all publications from the American Journal of Clinical Nutrition (the highest impact journal in nutrition at IF ~6.9) and another PI being similarly successful in terms of epidemiological modelling of vitamin D intakes. This seems a real flagship area of research for the School. In terms of assessing individual outputs, one did need to be an expert in the fields as the remote reviewers have scored some papers higher than one would expect on impact factors, and particularly recommended well cited publications in their field, as should be the case. Of the 135 publications submitted, 14 excellent publications were produced by the School. Looking at scores on an individual basis the majority of individuals and papers were considered very good and good – marginally closer to good. The School needs to consider this distribution and if they are serious about being competitive they should focus on bigger, more impactful studies.

The selected published output of the School has been demonstrated to be of a good standard.

RAI 2 – Total published output

When taking all the publications together this shifts the distribution of scores towards very good which is pleasing and indeed there are more publications rated as excellent (19%) than very good (12%) which is again very positive. Clearly a number of group leaders/PIs are very productive in terms of the number of publications.

The total published output of the School has been demonstrated to be of a very good standard.

RAI 3 – Peer esteem

Peer esteem rankings were centred around good (38%) and very good (35%). A number of the School are real world leaders and have been for some time in their research areas. However, there is a slight concern that only two members of the School are classed as excellent. In terms of recruitment, the Panel feels that the School should focus on this top end to make a difference in the School. Increased engagement with EU funding schemes would also improve the international standing of the School.

The peer esteem activity of the School has been demonstrated to be of a good standard.

RAI 4 – Research-related activity

Both nutrition and food sciences have excellent industry interactions. Despite the tough economic environment, the School has access to some excellent resources which has been paid in part through these industrial interactions. The food halls for food sciences were very impressive as was the facilities for human intervention studies. The Panel was a little surprised to see the brewery not in use, and would encourage the School to ‘think out of the box’ in terms of how they might use these facilities throughout the year (we heard some very innovative schemes for teaching labs in microbiology that day). Concerns were raised about the maintenance of equipment and the lack of support from the centre for this funding. While sympathetic, the Panel did feel this was fairly standard and that PIs would need to recover more of this from their grant funding. However, the centre can also contribute by engaging how, for example, increased overheads on industrial grants might be spent.

The research-related activity of the School has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

The School effectively runs two PhD schemes as well as taking on MPhil students. For Food Sciences there are 67 PhD students split across the six years of study, 13 research MSc students and 17 taught MSc students. The Department has been very successful at attracting these studentships which are largely funded through DAFM often with industrial backing. The facilities available to the students are world class in terms of food science and the Panel were most impressed by the tour of the brewery, bakery and cheese hall. It was also very refreshing to hear that student projects came first in these facilities as clearly they make for an excellent

training environment. Employment prospects were excellent with the majority of PhD students going into the food industry and hence contributing to the wider economy of Cork, and Ireland in general. The Panel had a concern over the low ratio of post docs to PhD students, with many labs only having one post-doc. The Panel was told this was because of overheads associated with post-docs but it does mean a section of the research community is missing out on training, and also raised some concerns on the Panel over whether students were adequately supervised in the lab. However, the students did not share our concerns and seemed very happy with the level of supervision.

In nutrition, there have been 24 PhD and 25 MSc studentships over the assessment period. Again, students had access to an excellent training environment and we were most impressed by the volunteer suite and what is available for intervention based nutrition. This is an important area for training the next generation of nutrition scientists and we imagine these students are hotly fought over by both academia and industry (the transferable skills are equally used in drug trials as well as nutrition studies). The Department seemed to have a better balance of post-docs to PhD students.

The students seemed happy and engaged well with the Panel, not raising any major concerns. One thing they did raise is that they used to have a day devoted to poster presentations where second and third year students presented their work, followed by a team building barbeque. This had also helped students that were off-site, at places like Teagasc, feel part of the Department. The Panel would strongly support them in reinstating this.

The postgraduate research education activity of the School has been demonstrated to be of an excellent standard.

RAI 6 – Research income

The School has diversified and increased funding overall during a very difficult economic period which is very good. They should rightly feel proud of this. However, our feeling is that they shouldn't stand still. Although there have been successes in EU funding we feel they could do better, particularly given the excellent facilities in both food science and human nutrition the School has access to. There is also the Irish nutrition survey which could be a unique selling point.

Another area that needs to be looked at is the overheads on industrial grants. While the School has been very successful in interacting with industry if they charged more in overheads and were to see this money come back into the School this could contribute to solving problems like maintenance contracts on expensive equipment and maternity leave. To place this in perspective we heard a range of overheads for industry being charged from 30% to 100% of staff costs (and even some nuanced figures), whereas in the UK these figures are typically 100% to 130% of full economic costs. This needs to be tackled by both the School and the centre to negotiate these overheads and also agree where the extra money is spent.

The research income activity of the School has been demonstrated to be of a very good standard.

Areas of good practice

The Panel was very impressed by the diligence and training environment for both PhD schemes within the School. Clearly this is a major focus of the School and they should be congratulated for this. It is clearly making a significant impact on local industry and the students have excellent career prospects.

The facilities in food science are world class and we were most impressed that these were available to student projects.

The human intervention study suite is an excellent investment and if there had been more time we would have liked to have drilled down a bit more into its use by both the School and externals.

The work in vitamin D analysis is world class and the ODIN projects have the potential to produce publications in high impact journals.

Recommendations for future development

In terms of both food and nutrition sciences this unit is internationally competitive and would be classed as world class against other similar units in these fields. There are some excellent resources available and the location alongside so much of the Irish food industry is a big benefit. We do feel though that they need to be more competitive to move things forward – certainly looking at their publications this is an area where some strategic



thinking would help produce bigger, more impactful papers. There were clearly some major concerns within the School about what the immediate future holds. They are faced with retirements at the Professorial level and because of government restraints they have not been allowed to fill these vacant posts despite being what seems to be a well-funded School. Somewhat surprisingly while the School provided us with a plan for recruitment it wasn't apparent whether the College or the Centre had an overall plan. A concern is that if Food and Nutrition Sciences miss out in the next round to higher performing units it is going to be very difficult for them to maintain their research outputs – especially at a time when they perhaps should be considering increasing the impact of some of these outputs.

Specific recommendations:

1. For the senior members of the School to meet to examine the publications they contributed to the quality exercise. While some of this was very good they really need to consider how to push the level 3 papers into level 4, and also not to be contributing lower level papers. While the remote reviewers did take into consideration the contribution made to the field we worry that a review more focused on impact factors would have come away with lower scores.
2. To be allowed to recruit at the professorial level to replace retirements that have happened over the review process.
3. The centre to consider promotion prospects for the high performing Lecturers and Senior Lecturers in the Department.
4. Assess overhead charges on industrial grants and where these overhead charges go.
5. Examine mechanisms to encourage mixing of PhD students in both Departments through events such as poster days.
6. Increase participation in EU funding schemes to both further diversify funding and also encourage bigger collaborative projects which should lead to more substantial publications.

Concluding statement

The research activity of the School has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel D: Microbiology

Introduction

The School of Microbiology submitted 18 individuals for assessment of which 16 were permanent or fixed term. Of the 16 staff, one was also returned in the School of Biochemistry and one was also returned in the Department of Pathology. The School encompasses the BIOMERIT research centre. The staff for this centre map wholly onto the School and as such the School and the Centre were evaluated together and the narrative supplied here applies equally to the School and the BIOMERIT centre.

In advance of the site visit the School provided a comprehensive document detailing the School strategy, a summary of research outputs, a synopsis of grant capture, performance metrics for individual members of staff and benchmarking data set against the major microbiology research foci in the UK and USA. In addition, the Panel was provided with remote reviewer reports for RAI 1-3. The Panel assessed these scores across individual researchers and between researchers. Scores were mediated where reviewer's scores deviated from that considered to be the norm for the discipline.

During the site visit Panel members met with most members of academic staff and also separately with members of the postgraduate community. During this meeting the Head of School gave a presentation reinforcing the data provided in the initial document but which provided additional detail around teaching commitments, total research outputs, research activity indicators, internal engagement and global integration. In addition, the Head of School detailed the challenges facing the School in the coming years.

The evaluation here is based on the remote reviewers' reports, the submitted documentation and the site visit by the Panel. Conversations with staff and students created a clearer picture of the research activity and the level of integration between academic staff, research staff and postgraduate students.

Overall evaluation of research activity

The overall research performance in the School is outstanding. The School is a nationally and globally engaged academic unit with teaching and research



benefitting from an international dimension. The activity is good to excellent across all staff grades. There are an impressive number of PhD students and postdoctoral fellows driving the engine of research within the School. Much of the stellar activity in the School is supported through the APC with half of the staff being active members of this Centre. The APC is well funded and has an open door policy of accepting and supporting researchers who wish to focus research efforts in the area of gut biology.

The number of research outputs in the form of published manuscripts is staggeringly high, though notably the output peaked in 2012 and has declined significantly to 2014. Even so, the number of published articles for 2014 remains on par with the highest achieving microbiology research centres globally. With renewed funding for the APC, it is anticipated that the number of outputs will increase in the coming years. Ninety percent of the staff had an RAI 2 score above 'good', 67% had an RAI 2 score above 'very good'.

The quality of the outputs is notable with published material in the most reputable scientific journals such as Nature, Science, PNAS and Nature sister journals. The published work has attracted considerable citations as reflected by the relatively high metrics for members of staff. Eighty-five percent of the submissions for RAI 1 were considered 'good' or above, 61% of the submissions were considered 'very good' or above.

The individuals comprising the School are generally well recognised in their fields and this recognition is reflected in the award of positions of merit in global and European research organisations, as well as the acquisition of several awards notably one member of staff being elected to the Royal Society. Ninety percent of staff scored 'good' or above in RAI 3 and 50% of staff scored 'very good' or above.

Research on bacterial viruses is excellent. However, it is not clear how human virology is integrated into the research themes for the School. Some consideration might be given to re-profiling this activity such that it is more integrated into the internationally leading gut microbiology research being conducted through the APC.

The School sought to address many of the recommendations from the last RQR, implementing partnerships with national research centres to access genomics capabilities. The School has expanded its bioinformatics capabilities through recruitment and training. One member of staff applied for an ERC award, and whilst unsuccessful at first attempt, they will submit again in the coming round. The School anticipates an additional two members of staff will apply for ERC awards in the coming year.

Overall, the School is the destination site for Microbiology research in Ireland and is performing at a level commensurate with the leading Microbiology research centres globally.

RAI 1 - The selected published output of the School has been demonstrated to be of an excellent standard.

RAI 2 - The total published output of the School has been demonstrated to be of an excellent standard.

RAI 3 - The peer esteem activity of the School has been demonstrated to be of a very good standard.

RAI 4 - Research-related activity

The quality of the research environment is high. This is clearly evidenced from the positive and enthusiastic atmosphere generated by staff and students. The School is well resourced in terms of equipment. However, the School noted there were tensions around promotion and reward for research-related activity. Whilst the Panel recognised the constraints nationally around promotions they noted the discrepancy between the research metrics and the academic position of some staff members. The School should address this through the next round of promotions.

The teaching responsibilities of the School are substantial but not exceptional when compared with competitor departments and other universities. The School has lost 18% of its staff during the review period which has increased the teaching burden. Despite this, the School has maintained an equitable teaching load. The School should seek to expand its staff number to address the shortfall that has occurred in recent years and to ensure it sustains its competitive position.

The School is nationally and internationally engaged. The majority of staff has obvious measures of esteem and performs well in research-related activity. There were many examples provided including membership of international professional research bodies, membership of state and European bodies, invitations to international conferences, editorial duties for journals. Overall the performance in peer esteem and research-related activities were outstanding. The School has generated a significant number of patents and in the view of the Panel this is well above the norm for the discipline. The School also has significant interactions with industry and state research bodies, particularly around the food industry and through the APC which is supported by industry. Again, this level of activity is considered to be above the norm for the discipline.

The research-related activity of the School has been demonstrated to be of an excellent standard.

RAI 5 - Postgraduate research education

Postgraduate training in the School is excellent. There is clear diversity in the postgraduate student body with both local and international students working within the School. The postgraduate students were very content with the level and quality of supervision. The quality of supervision appeared generally uniform across the School and notably students are now enrolled into a framework programme that provides consistent teaching and supervisory arrangements. The large number of postdocs in the School results in excellent supervision within the laboratory. However, the majority of students finish in their 5th year of study. The School should address this and work hard to bring this within the accepted norm for the discipline i.e. four years maximum.

Some postgraduate students are located off site. These students feel they are not as well integrated into the life and community of the School. The School should give some consideration to research galas so that such students can become part of an integrated cohort. The postgraduate research education activity of the School has been demonstrated to be of a very good standard.

RAI 6 – Research income

The level of funding within the School is impressive. During the review period the School attracted 80 million euro of funding. This represents approximately 12% of the University's total grant capture from only 1.2% of its academic staff. On this basis, it appears the School is the best performing School in the University.

The level of grant capture declined slightly during the economic downturn but remained strong and now risen to levels equivalent to the “boom” years. The level of income from repatriated overheads sustained the Department through the challenging years. At the current time the trajectory for grant capture is increasing. The funding remains predominantly from national sources. However, such reliance of national funding is a risk and the sources of funding should be diversified as widely as possible in the coming years. Notably, many of the staff in the School would be excellent candidates for the prestigious ERC grants or Wellcome Investigator awards and these individuals should be encouraged to apply. This would attract additional national and international attention that would reflect well on the School and University. The research income activity of the School has been demonstrated to be of an excellent standard.

Areas of good practice

There is clear vision and strategic planning within the School. They have positioned their research activities to benefit from topical funding streams. As a result, grant capture and research performance are excellent.

Impressively, the School has maintained a fairly equitable teaching load despite the wide variation in research engagement. This is great for students as they can benefit from a research-led teaching experience.

The postdoctoral to postgraduate ratio is excellent and ensures that postgraduate students have mentors within the laboratory on a day-to-day basis. This engenders a sense of cohesion in the School and provides for an excellent grounding in research making graduating students highly sought after in the global community.

Renting the teaching laboratory space during the summer to an indie biotech company, which brings in bright students from around the world to pursue synthetic biology projects, is an excellent example of innovative thinking around increasing the School budget and also increasing the global profile of the School and the University.

Recommendations for future development

1. Recruit new staff now to fill the gaps that will occur due to retirement
2. Recruit new staff to build staff numbers back to 2008 levels
3. Seek to integrate all members of academic staff into the clearly successful research around gut microbiology
4. Address inequities in pay and remuneration against academic performance
5. Address the apparent gender gap in the staff profile

6. Consider how best to integrate the non-bacteriophage virology into the strategic research ambitions of the School
7. Reduce the period of time that PhD students take to complete
8. Ensure off-site students are integrated into the life and research activity of the School
9. Ensure staff diversify their funding base by applying to international funding sources i.e. EU and Wellcome
10. Enable the School to access additional space to fulfil its strategic needs
11. The School, and the University, should review the mechanisms by which they engage with industry and they should seek to increase the revenue they generate from industrial interactions. Pointedly, within the sector, 30% of staff costs are extremely low as a cost recovery model – that level of recovery suggests it might be better for academics to invest their time in grant writing rather than industry engagement as the financial reward would be greater.

Concluding statement

The School is outstanding. Staff appear to be happy and to work in an integrated and functioning environment. The School has built up an excellent research portfolio and has positioned itself to be internationally competitive in the area of gut microbiology and the emerging science around the impact of the microbiome on health. It certainly ranks amongst the top microbiology research communities globally and surpasses the activities of the recognised microbiology groupings in the “golden Triangle” universities in the UK. To maintain their position in the global ranking it is essential that the School starts succession planning now; it needs to recruit younger members of staff now to ensure those staff have adequate time to get up to speed before the senior members of staff retire in a few years. The School should address the discrepancies between success at research activity and the academic position/reward in the School or it will risk losing promising early and mid-career staff members to other research institutions. Risks to funding sources should be mitigated by encouraging several members of staff to apply for individual awards from the ERC and Wellcome and by applying for other sources of funding.

The research activity of the School has been demonstrated to be excellent and of leading international standard.

Panel D: Pharmacology & Therapeutics

Introduction

The Panel thanks the Department for their hospitality during the review process as well as their submission and supplementary information. The review Panel would have liked the opportunity to meet the whole Department rather than selected individuals (but recognise not all staff were available on the day) opened by an overview of the Department's activities and successes and vision for the future from the Head of Department.

There is concern about small numbers of post-docs and PG students within the Department and lack of research seminar programme and ideas/collaboration-stimulating events. This needs to be addressed in order to generate a vibrant and enthusiastic research environment. There was not a sense of “team spirit” usually associated with a Department of Pharmacology.

Lack of a bespoke undergraduate Pharmacology programme seems to hinder the identity of the Department and may hinder identification and recruitment of potential PhD students.

Although research output was being reviewed, departments should have had the opportunity to provide teaching hours on the assessment form. An individual's contribution to teaching should not be under-valued or indeed overlooked.

The Panel notes that the Department teaches several cohorts of undergraduate students (clinical as well as scientific) and staff are perceived to have relatively high teaching loads compared to other Departments (though no metrics available) and that there has been substantial curriculum development and restructuring during the review period. The Panel's visit to the Department in the Western Gateway building was very helpful and served to demonstrate the excellent lab and office space available. However, while there was a sense of the space being adequately equipped, it appeared to be under-populated, perhaps reflecting the current hiatus in funding.

The Panel noted that a relatively small proportion of published output was 'excellent', as defined in the guidelines and that the majority of staff has contributed to the Department's research output. The recent recruitment of at least three new lecturers and a Professor since the last review should enable the Department to significantly improve this output and increase the proportion ranked as excellent. The international profile of the Department has been enhanced by the appointment of several staff with a strong research record, within the review period. This was underlined by unavailability of individuals because they were invited speakers at international conferences!

Highlighting papers published by postgraduate students in published paper listing was useful. However, it also highlighted that the major contribution came from student's supervised by a staff member no longer in the Department.

RAI 1 - Selected published output

22% of outputs were considered to be very good and above. 64% of output were considered to be good and above.

The selected published output of the Department has been demonstrated to be of a good standard.

RAI 2 - Total published output

44% of outputs were considered to be very good and above. 64% of outputs were considered to be good and above.

The total published output of the Department has been demonstrated to be of a good standard.

RAI 3 - Peer esteem

Most members of staff exhibited markers of research esteem e.g. patents filed, membership of editorial boards, served as external PhD examiners, membership of grant Panels and expert review of grant applications for funding bodies.

In comparison to other Departments, supporting documentation was often less clear and accessible. This is particularly evident for RAI3 and RAI4.

22% of outputs were considered to be very good and above

64% of outputs were considered to be good and above

The peer esteem activity of the Department has been demonstrated to be of a good standard.



RAI 4 – Research-related activity

The majority of staff are engaged in activities related to their research with around a third engaged in activities rated in the excellent category. For staff with dual appointments in Pharmacy, it was difficult to ascertain their commitment to each Department and the proportion of their research-related activities that could be assigned to this Department. One such staff member was not subject to the review process though his research income and outputs were included in supplementary information.

The research-related activity of the Department has been demonstrated to be of a good standard.

RAI 5 – Postgraduate research education

We did not have the opportunity to meet with post-graduate students and, unlike other Departments, Pharmacology did not provide a detailed information regarding numbers and training of PhD students. Accordingly, our understanding of PhD training opportunities and assessment/progress monitoring is patchy and comes from discussions with academic staff. A total of 21 PhD students have graduated with generally acceptable completion periods with one notable exception. The numbers of current PhD students in the Department is unclear but seems quite small and isolated. At present, there is no Departmental seminar programme for post-graduate students to attend. There is an annual post-graduate presentation day at which they present but there seems to be no regular journal club or similar research meeting at which they can develop their presentation skills (doesn't have to be data-led, could be journal club or 3 minute flash presentation of a new idea/concept).

The postgraduate research education activity of the Department has been demonstrated to be of a good standard.

RAI 6 – Research income

The research funding of this Department is reasonable given the current funding situation, though it was noted that five individuals provide the majority of the income and of these, one has transferred to another Department and another is on long-term secondment. The Committee acknowledges that recent appointments have shown promise and have been successful in generating income and is reassured that the Department wants to support established staff to generate research income but wasn't clear exactly how this was going to happen.

The research income activity of the Department has been demonstrated to be of a good standard.

Areas of good practice

The research and teaching activities of the staff are perceived to be have been significantly improved by centralising to Western building. The facilities/environment are superb and world class and should encourage and support future Research output and development of team spirit and identity. The fairly recent appointment of a new professorial member of staff to provide new leadership for the Dept. is expected to further influence and contribute to this process. There are good examples of trans-disciplinary interactions and excellent examples of Public engagement and outreach activities

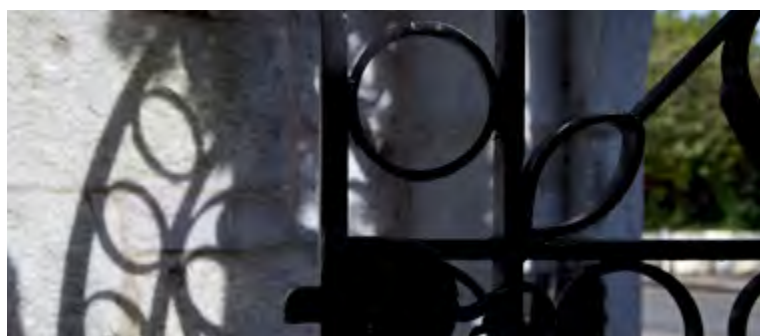
Recommendations for future development

1. Consolidation and expansion of collaborative research projects.
2. Encouragement and support for established academic staff to attract research funding.
3. Developing a clear research strategy/road map for attracting research funding and for the next five years.
4. Development of a Departmental identity that better supports research activities, including PhD as well as Post-doctoral staff recruitment and training.
5. Establish a strategy for encouragement of promotions to improve staff morale and productivity.

Concluding statement

The research output of some individuals within the Department is excellent, while others are satisfactory and occasionally disappointing. Recent new appointments at senior and junior level should improve overall research activities but a clear research strategy is required that should foster collaborations within the Department. The small size of the Department and diverse research interest means that such a strategy will inevitably be reliant on collaborations outside the Department. Serious consideration should be given to merging with other similar sized and relevant Departments in order to establish an effective critical mass of researchers.

The Department lacks identity due in part to (i) lack of a teaching programme associated with the Department (ii) previous lack of leadership over a sustained period of time (iii) lack of Departmental research activities such as seminar programmes and such-like. Dual appointments seem to have been successful in attracting grant income and these should be exploited to further build collaborative research links.



Individual members of staff are performing ably. However, they are still suffering the effects of a previous lack of senior academic leadership. This has now been resolved but time is required for this to have an impact.

The reviewers noted that several academic members of staff were not able to attend the meeting with the Panel. This made full review difficult and possibly impaired our full appreciation of the Department's activities and achievements.

The research activity of the Department demonstrates significance to the discipline and rigour to a good standard.

Panel D: Physiology

Introduction

The Panel wishes to thank the members of the Department of Physiology for the provision of the submitted documentation. Their compliance with the guidelines helped the overall review process greatly and allowed the Panel to optimise the limited amount of time spent on the Departmental tour. The detailed contextual information contained within the statements was very helpful in aiding the Panel to review the Department's research activities. The reviewers were particularly impressed by the general reception that the Panel received within the Department. The opportunity to meet all staff members (academic, support, postdoctoral, postgraduate) was welcomed warmly and the chance to have open discussions with support and junior members, in the absence of senior academics, a clear demonstration of the inclusive and cohesive nature of the Department. It is noteworthy that support staff, postdoctoral research associates and postgraduate students were all very positive about the general philosophy of the Department which reflects well on the current leadership.

RAI 1 – Selected published output & RAI 2 – Total published output & RAI 3 – Peer esteem

The research activity and outputs submitted under RAIs 1, 2 and 3 were reviewed by the Panel and two independent expert reviewers. Against the criteria of originality, significance and rigour, a satisfactory proportion of outputs were identified as very good with the occasional excellent highlight. The Department is making good progress on outputs in peer-review journals and the volume of publications demonstrates an upward trajectory over the latter part of the current reporting period which perhaps reflects the introduction of new research groups within the Department. Further improvements in both quality and quantity of outputs seem likely as recently appointed staff become established. However, for this general improvement to continue, additional appointments at mid-career and senior levels are required to replace staff lost through retirement and resignation and to ensure manageable teaching loads across the whole Department. Although the esteem indicators were not distributed evenly across all members of the Department, a good proportion of staff demonstrated activity against the criteria of extent, diversity and equality, from good to excellent at both international and national levels.

Both the selected published output and total published output of the Department have been demonstrated to be of a good standard. The peer esteem activity of the Department has been demonstrated to be of a good standard.

RAI 4 – Research-related activity

The evidence presented in the documentation submitted, and that given during the Departmental tour, identify a vibrant, predominantly young, research-active Department which uses this ethos to great effect in undergraduate and postgraduate teaching. The Department has a diverse research portfolio which is a real strength when considering the significant contribution made to research-led teaching at UCC. However, the breadth might also be viewed as a potential weakness in relation to research outputs and critical mass. The Department has a range of technical expertise, from molecular through whole organ, whole animal/man and in vivo measurements, found in few institutions. The central research strategy of the Department suggests that they are acutely aware of the requirement to exploit their strengths and technical expertise to target larger pots of funding by making team applications. The strategic research goals of the Department align with some themes within the College of Medicine and Health. Their unique technical skill base should provide opportunities for collaboration in areas of translational medicine (an area that could be used to target income growth). The research environment fostered by the Department is inclusive and the research-related activities wide-ranging including notable activity in research seminars (scientific and lay audiences), residential technique workshops, and outreach programmes. The Department has external recognition for its activities in the wider Physiological sphere through membership of international academic societies. However, the level of external engagement is not uniform across the Department and this is an area for development. It should be noted that these activities are accomplished against a relatively (both within and outwith UCC) high FTE and significant improvement will require investment in senior staffing levels.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

The programme for postgraduate research education, as organised by the Department Graduate Studies Committee, is excellent. Recent improvements in the review processes and supervisory arrangements are evidence of best practice that should be adopted across the sector. The continued support from Departmental supervisory teams and assessors up until the point of submission is another notable example of good practice. All are likely to lead to improvements in completion rates which for PhD students are already very good versus the sector norm. The completion rates for MDs are a little low but the overall numbers are small relative to the larger cohort of PhD and MSc students. The facilities available for postgraduate training are excellent and represent a marked and welcome investment by UCC since the previous review.

The postgraduate students interviewed were extremely enthusiastic about the training and facilities available within the Department. It was striking how well integrated the students are within the departmental structure and they demonstrated full ownership of the departmental philosophy of inclusion, collaboration and collegiality. The postgraduates receive excellent careers advice from supervisory teams within the Department but an area for improvement at the level of the School/College would be increased provision of careers advice on other (non-academic) career pathways. The Department has in place a good support system for internal PhD funding but how sustainable that is long-term, without full budgetary control within the Department, is unclear. An area to target is to increase the number of externally funded PhD studentships.

The postgraduate research education activity of the Department has been demonstrated to be of an excellent standard.

RAI 6 - Research income

It is commendable that research income demonstrates a small but sustained increase. In particular, there are a large number of small grants that have been funded over this assessment period. However, the bulk of the income has been generated by a small proportion of staff (one of whom has retired). Some staff members have little grant income in the assessment period. The breadth of expertise within the Department is impressive. This broad array of available techniques should be utilised to apply for larger grant funding. The key areas for grant funding over the next few years are going to be translational and applied/industry-related. The Department is well placed to elaborate on current, and establish new, collaborations in the College of Medicine and Health to improve the likelihood of success. However, staff will need to embrace the thematic changes within the College to be able to optimise potential funding streams. As recognised within the Department, larger grants are required to continue the recent increase in postdoctoral research associate numbers, which in turn enhances the overall research environment and improves postgraduate training. The large-scale application submitted recently from Physiology, Anatomy & Neuroscience, and Psychiatry, demonstrates that the collaborative framework is being adopted. Focused investment in new staff (to help reduce the relatively high teaching loads and FTE) at Associate and Professorial levels could be used to effectively link disparate groups within the Department and to enhance collaborations with other groups such as the Alimentary Pharmabiotic Centre.

The research income activity of the Department has been demonstrated to be of a good standard.

Areas of good practice

The postgraduate and undergraduate teaching within the Department is of international standing. The structures in place for training and continual assessment of postgraduate students are excellent and demonstrate best practice within the sector. The collegiate spirit of inclusion and support within the Department is excellent and all members of staff (academic, support, postdoctoral and postgraduate) demonstrated full

ownership of this philosophy in their dedication, commitment and loyalty to their discipline. The grant income and research outputs of the Department have followed an upward trajectory over the latter part of the current assessment period.

Recommendations for future development

1. Allocation of institutional funding to enable the appointment of two senior staff (one at Professor and one at Associate Professor) to replace those academic positions lost during the current assessment period. The appointments could be used to support current research strengths within the Department and/or to enhance links to the UCC research centres and College themes e.g. APC and INFANT. The current structure (a small Department with a single senior academic staff member) is not sustainable if UCC envisages the Department competing at the highest international level in research.

2. Replacement of all retiring staff in a timely fashion. The current model is not sustainable if UCC expects current staff to perform at an international level in research while carrying high teaching loads.

3. Creation of the School of Physiology, Anatomy & Neuroscience (SPAN... spanning the disciplines), following the successful models used at, for example, Cambridge (Physiology, Development & Neuroscience) and Oxford (Physiology, Anatomy & Genetics). The two Departments (Physiology and Anatomy & Neuroscience) are currently grouped together on two main sites (WGB and BSI). Formation of the School would create a critical mass of academic and support staff, would enable some rationalisation of teaching activity, and would empower staff by providing them with control of the teaching income stream.

Concluding statement

The Panel thanks the Head of Department and all staff in the Department of Physiology for their contributions to this exercise. As stated above, the dedication, commitment and loyalty of staff (academic, support, postdoctoral and postgraduate) to the discipline of Physiology, in both teaching and research, was a notable highlight of the visit. The overall research performance of the Department is good and has improved markedly since the last assessment but there remain areas for improvement (see above). Esteem indicators are good but are not uniform across the Department. To enable continued improvement, it is important to adopt a more collaborative approach to research, to maximise local (College) collaborations and to enhance success in grant applications. This process is underway and a number of examples of collaborative ventures were identified within the departmental documentation. The Department is severely under-staffed due to the lack of replacement of staff lost through retirement and resignation during this reporting period. The Department has clearly gone through a difficult transition period over recent years but there are many signs that the Department is moving in a positive direction. Their commitment to delivery of high quality teaching is a real strength and should be noted. However, some rationalisation of teaching may be required to release more time for research. The research environment fostered by the departmental leadership is

excellent and is conducive to an increase in productivity. The provision for postgraduate education is excellent. To enable continued improvement, it is essential that the Department receives institutional support to appoint new senior staff and to replace those lost through retirement. Allocation of institutional support to create a School of Physiology, Anatomy & Neuroscience (which received support when discussed in both departmental tours), would likely be the single most effective way of empowering the current staff to enhance overall research performance in the future.

The research activity of the Department demonstrates significance to the discipline and rigour to a good standard.

Panel D: Overall comments

The Panel members were made to feel very welcome by the staff at UCC. It particularly enjoyed meeting with staff members and opportunities to meet with staff at all grades and postgraduate students. The Panel found that staff in the Schools/Departments visited were generally very supportive of each other. However, the Panel did find that staff were generally sceptical about the RQR exercise as many voiced their concerns that nothing/little had changed after the equivalent exercise in 2009 and this may have been reflected in the apparent lack of engagement voiced by some staff or by their non-attendance at meetings.

The Panel was made aware of the financial changes and strictures that had inhibited investment in staff since 2009 and some of the units examined seemed to have suffered disproportionately by their inability to replace staff and promote remaining staff. When the financial situation improves staff obviously needs to be appointed in a strategic manner. Going forward, a risk of a lack of investment in units where teaching load is high could lead to the Department/School seeking to enhance its research profile by shedding as much of its teaching as it can. The only thing that apparently stops this is the sense of moral obligation of the academic staff. Teaching workload coupled to a lack of transparency and accountability could inevitably lead to a degree of disaffection within the Department/School. The Panel

understood that this may reflect the lack of transfer of resources for teaching conducted by the Department/School particularly when courses cross College boundaries.

We did note that while the Research Centres appear to be well organised effective engines for supporting these activities, for the College there is a very considerable amount of research income generated from activities outside those Centres – and a considerable amount that may have been opportunistically badged as Centre activity but which might justifiably have been badged differently. In particular, it should be noted that the practice of badging grant income within Centres might underestimate the true level of research activity and strength in certain areas such as Neuroscience. The investment focus in Centres may in some cases at least account for the variability of quality across Schools/Departments.

It appears important that effective support for grant writing and grant management should be equally available to all research-active staff. The Colleges should note that the areas of strength and focus currently recognised may obscure understanding of areas of incipient research strength – for instance in neuroscience across the University. This is not meant as a criticism of the principle of identifying areas of strength, promoting them and developing them – more to note that it is important to understand the true nature of research strength in a nuanced way, to allow the College the flexibility to reconfigure its research assets adroitly in response to future opportunities and challenges.

As commented upon earlier the size of the groups caused all the Panel members concern. Small sub-groups tend to increase the risk of silo formation which results in a lack of coherency and of a clear shared vision. Formation of fewer larger units, with clear identities, would provide staff with more support by reducing duplication of the functions required to form a sound infrastructure. The Head of a larger unit could then be involved in senior management at college level and clear lines of responsibility and financial transparency could be developed. This may serve to improve communication as we found that some of the initiatives developed by the Centre were unknown at School/Department level.



Panel D: Recommendations to the University

Process issues

Several DVCs reported some problems with some remote reviewers such as lack of engagement with the process, misunderstanding of instructions, mismatches with respect to outputs as the submitted publications lacked a unique identifier so the DVCs had to spend time ensuring score matched output which ultimately created additional workload for the DVCs. If the RQR is to be repeated, then this system should be reviewed, especially if there were issues across other Panels.

Year by year summary metrics would have assisted the process.

Staff failed to complete the proforma IRIS in a consistent way which again made the review process unnecessarily arduous.

Calibration between and across Panels is important and strongly recommended if the RQR is to be used in a RAM.

The Panels should have had more time allocated to talking/listening to ALL staff during the exercise, the time allocated for presentations from senior managers could have been reduced and power points/podcasts provided before the visit if necessary.

More information on management structures and teaching allocation/loads before the visit would have been helpful in providing context as all staff appeared to have a teaching allocation and this obviously impacts upon time for research. This presumably accounts for the nil returns for some staff in RA1 and RA2 and although this may reflect the overall research activity in a School or Department their inclusion in the metrics had the potential to skew the overall scores to some extent and could in effect penalise those Schools/Departments with heavier teaching loads when results of the RQR are applied to a RAM.

General recommendations

The size of the groupings reviewed by Panel D caused concern in that they were all small units allowing for no economy of scale. This probably explained the lack of supporting infrastructure to facilitate research (and teaching). Regrouping into larger units would, in the view of the Panel, facilitate academic activity, not least by reducing administrative burdens, especially if accompanied with appropriate budgetary control and autonomy.

The role of the College and the representation of the units reviewed was also unclear, this was particularly apparent in medicine where for example Anatomy & Neuroscience could easily get overlooked and have little say in strategy formation and had little budgetary control. Larger more autonomous groups would also feel empowered to grow income that would in effect financially subsidise research by creating more courses particularly in terms of postgraduate taught

programmes/CPD that could also serve to, for example, increase postgraduate research numbers.

In the organisation of research, mechanisms to enhance cross disciplinary collaboration and co-operation are critical for sustained success. There is a patchwork of structures to address these, some of which appear to work well in certain areas, but which collectively are inconsistently effective and which also appear to impose an additional and avoidable administrative burden on academic staff. Put simplistically it appears that academics have evolved structures (such as the Cork Neuroscience Centre) to attempt to mitigate the adverse consequences of structural walls between communities when many of the walls themselves seem to serve no obviously good purpose and are perhaps better dismantled, with the potential benefit of greater sharing of resources to support more effective administrative structures to relieve what seems to be an unsustainable administrative burden on academics.

It was not clear to the Panel what practical benefits the College system brings to a Department/School. Mechanisms such as Prime established by the Centre do not seem to have been aligned to needs at the 'coalface' in some cases and are not used or even widely known. Intradepartmental mentoring and support for academic activities such as grant writing are excellent, and good support for grant writing and grant management is available for some through Centres, but this seems very inconsistent and as such can at the very least be demotivating for staff not included.

The Panel spent some time discussing overhead rates and all agreed that this needs to be examined, particularly with respect to industrial partners, in order to ensure the sustainability of research - otherwise UCC would in effect continue to subsidise industry.

Exactly what the rationale is for returning overheads to staff needs to be articulated; in effect this policy as it operates appears to have the effect of a cross subsidy from research income gained in areas without intensive strategic support from College to areas in which such support has been focused. This seems a clear policy of engineering research focus, but whether it is one that maximises grant income and innovation needs to be tested. Alternative approaches to using overhead income in a targeted way to generate the pilot data necessary for credible grant applications in any area of research will need to be clearly communicated to staff; another approach might be to use it for bridging funds to retain key expertise, and another approach again might be to maximise the volume of research active staff by seed corn funding of researchers who lack grant support but who might become competitive with structured encouragement as may be the case with junior staff members. There are other alternatives: there needs to be discussion, and this needs to be a dialogue with researchers at the sharp end, and perhaps there should be a flexible policy that adapts to changing circumstances.

Staff should be encouraged to explore and seek funding sources outside Ireland, diversification would reduce the impact of any future financial downturn.

Panel E Report

Units in Panel E

School of BEES: Geology
 School of BEES: Plant Science
 School of BEES: Zoology & Ecology
 Department of Chemistry
 Analytical and Biological Chemistry Research Facility (ABCRF)
 Environmental Research Institute (ERI)

Panel E Members

Chair: Professor **Dianne Edwards**, Cardiff University
 DVC for Geology: **Professor Hugh Sinclair**, University of Edinburgh
 DVC for Plant Science: **Professor Christine Foyer**, University of Leeds
 DVC for Zoology & Ecology: **Professor David Paterson**, University of St Andrews
 DVC for Chemistry: **Professor Nicholas Turner**, University of Manchester
 DVC for ABCRF: **Professor Jonathan Williams**, University of Bath
 DVC for ERI: **Professor Michael Gooding**, Aberystwyth University

Scope and context of the review

Modus Operandi of Panel

Initial communication between the Panel members in early 2015 was via e-mail when principles, procedures and guidance to external assessors were discussed. Queries were then incorporated into a report compiled by the Chair and sent to the RQR Steering Committee and Quality Promotion Unit. Face to face discussion in Cork in June culminated in more or less completion of draft reports and rehearsal of the presentation to Schools and heads of ERI and ABCRF (henceforth 'Centres').

Particularly important during discussion was the calibration of scores by Panel members following reading of selected papers. This allowed moderation of scores submitted by external assessors as appropriate, as well as maintenance of consistency across disciplines, the latter being especially relevant to the School of Biological, Earth & Environmental Sciences (BEES). We welcomed this time for intra-Panel discussions.

General Observations and Comments

Panel E covered a range of disciplines within BEES, chemistry and research centres, each of which has its own report. The following comments relate to more generic issues with particular concentration in some areas on BEES (plant sciences, zoology, ecology and environment & geology).

General Observations

First, all Panel members were appreciative of the professionalism of the submissions and the achievements made since the last assessment, which were all the more laudable in view of the fact that the period reviewed was a time of major staffing and financial constraints. We were aware that external influences resulted in increased teaching duties with consequences for research activity, and despite this were impressed that research income is now showing signs of recovery especially utilising EU and all-Ireland initiatives. We very much appreciated our visits to Schools and Centres and benefitted from very enjoyable and informative interactions with academic staff and postgraduates. On reflection, and particularly in the case of BEES and ERI, we would have welcomed additional time on site, perhaps at the expense of duration of meetings with senior University management, although these too were rewarding and useful experiences.

Submission prior to the visit

a) Information received. On the whole this was adequate, but in the case of BEES, we were requested to provide reports on the three major disciplines within the School, although relevant data were sometimes difficult to disentangle in the all-embracing report. Such data were eventually produced on request and here we would commend the PowerPoint presentation produced for Professor Paterson on his site visit to 'Zoology and Ecology' as excellent practice. Although we have produced three reports, we wish to emphasise that we did take note of the efforts made in the School to integrate activities and congratulate the heads, past and present, on their progress in promoting interdisciplinary activities. The location on the North Mall Campus has undoubtedly played an important role in this endeavour, although distance from the main campus

has its downside as regards IT provision particularly for postgraduates.

General comments on submission

a) Publications. The inclusion of all publications during the assessment period was excellent practice. Due notice was taken of discipline-related differences in productivity, but we could not make any judgment of effects of heavy teaching loads in this area. In some cases, particularly in BEES, greater attention should have been paid to the choice of the five publications in RAI 1. These were required to demonstrate excellence in research. The associated narrative in some cases would have benefitted from greater scrutiny and mentoring. Greater attention should have been paid to the journals which were chosen for publication to enhance academic impact.

b) Funding. We commend staff for the range of sources of research funding, including that for postgraduate training. However, in some instances research excellence and focus may have been compromised by the need to generate income via short-term contacts.

Panel E: Geology (BEES)

Introduction

The Geology unit has gone through very significant changes during the review period in terms of reduced staffing and funding. This has brought some huge challenges, but two new appointments, an internal promotion, a new Masters programme and some major new grants indicate a reinvigorated unit that now has the opportunity to build a strong research identity, most likely based around applied geology as identified by the iCRAG project. The sections outlined below (RAI 1-6) review the key components of research within the Geology unit from the assessment period, and are aimed at highlighting issues that should be addressed and where best-practice should be maintained. Importantly, the new grants from iCRAGS and ERC are not a part of this review as they fall outside of the time period for the review. However, a number of issues relating to publications, esteem and postgraduates will not be rectified simply by the influx of research income, and so it is important that the unit takes this opportunity of a review alongside renewed income to identify the key challenges for the next few years, and put the mechanisms in place to respond to these challenges.

RAI 1 - Selected published output

The publication output from this unit is highly variable. There are a small number of publications of outstanding international quality, but a number which could not be counted as 'research' output. For example, field guides, replies to comments, book chapters and books that contain no new data or interpretations cannot be considered part of the research profile of a unit. However, the majority of the submissions that are counted in 'research' represent a good level of research with some reflecting international impact in their disciplines. There is a strong field component to some of the research

output, and this is commended. However, it is important that technical innovation is supported, as exemplified by high profile papers involving geochemical and novel palaeontological techniques.

Emphasis on publication in international journals, as the priority above book chapters and reviews, is needed, as is discussion on strategies for submissions and the creation of an internal review Panel before any future assessment. It is important to highlight papers written by PhD students under the supervision of staff in the unit. Good papers written by PhD students reflect highly on an institute.

The selected published output of the unit has been demonstrated to be of a good standard.

RAI 2 - Total published output

As with RAI 1, the high degree of variability is noticeable in the output quantity of staff in this unit. Clearly, numbers of papers published per staff member will vary dependent on the extent of multi-authored papers, and the nature of the data collection and analysis. In some areas of the submission, numerous papers published per year reflect a dynamic research profile. However, the unit should aim for an absolute minimum target of at least one paper published in an international journal per year, and ideally as first author. This should be discussed at appraisals.

Discussion of publication output at annual appraisals is recommended together with the need to target consistency of quality with some level of quantity in terms of output.

The total published output of the unit has been demonstrated to be of a good standard.

RAI 3 - Peer esteem

A number of the more senior staff have a strong reputation within Ireland reflected in editorial activities and science committees. Some younger staff are clearly on a strong trajectory and are being recognised through awards, and should go on to build international esteem in the coming years. The challenge is to build a more international profile among the more established staff members; evidence of this through European networks has been initiated. Much of this requires attendance at international rather than regional conferences.

The building of an open culture of discussion around research strategy is recommended as is a support system for staff who are willing to re-launch their research in association with the new initiatives such as iCRAGS and the new Masters programme. A budget is needed to enable staff to attend international conferences. There is a danger that an over-emphasis on applied geology in the coming years may compromise international esteem; this is a balance that will need keeping an eye on into the future.

The peer esteem activity of the unit has been demonstrated to be of a good standard.

RAI 4 – Research-related activity

Outreach activities appear very good, particularly some of the events organised by the PhD students that bring the general public into the buildings. Although the emphasis seemed to be on the biological materials at these events, the development of the Geology Garden is an impressive feature that must enthuse the general public. The involvement in TED talks and other media outlets is commendable.

The opportunities offered by the linkages to industry are valuable, particularly in Masters teaching and the possibility for work placements. This is clearly a growing strength of the unit that has come about through the development of the new Masters programme. The focus on pedagogical development is impressive, and the impact this has had in contributing to the Hunt Report on higher education reflects the importance of this aspect of the research unit.

Overall, the level of research activities beyond the processes of grant-raising and paper-writing are very impressive on a number of fronts, and this should be supported as the research profile builds into the future.

The research-related activity of the unit has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

The documentation of numbers of students linked to first supervisors in Geology is poor, and it was necessary to seek clarification from staff. The information obtained is that there are currently nine PhD students with 1st supervisors in Geology and that there have been 22 students in total over the assessment period; this is on the low side giving staff approximately three students over the seven year assessment period, although presumably these are not evenly spread. The mean completion time across the School of 49 months is high, and in discussion with the students, they felt 4.5 years was a common period for completion. This should be reduced to nearer 3.5 years given the funding is for only three years. Some of the reason for the extended duration of PhDs is the poor level of some of the technical facilities, particularly the IT support. Dependent on whether the students have a 'wired' or 'unwired' access to the internet, determines their access to certain statistical packages; there are also issues about printing. They felt they were falling between the cracks of staff and undergraduates. These IT issues need resolving as a priority. School level completion rates of >95% appear similar to other institutes. The Panel did not have the data for the Geology unit.

There were some differences in the supervisory arrangements, some students had two supervisors and one advisor, others varied from this. It appears that all the newer students do have two supervisors and an advisor; this structure should be made consistent throughout. It appears the review processes and the formalities for progression are now in place, and the students appeared to understand that this had been instigated over the last few years, and that it is now working well.

Overall, the Geology students spoken to were enthusiastic, and were happy to be part of a School

of graduate students who could share knowledge.

There were some issues regarding location of offices, and they felt that it would be useful to have them co-located as a function of subject area. They also felt that given the input they have into undergraduate teaching, they wanted to be invited to the event organised for departing 4year undergraduates – it is a shame if they are not invited to this!

Recommendations: IT is the priority – this will be raised from all components of the review. It is important to retain the structure of two supervisors per project and one independent advisor from another part of the School.

The postgraduate research education activity of the unit has been demonstrated to be of a good standard.

RAI 6 – Research income

Although research income declined over the period of the assessment, the overall number of 3.5M Euros is reasonable for such a small group. Looking forward, it is clear that there is a significant change generated by iCRAGS and ERC income. Industrial income is likely to increase in association with the development of the applied Masters programme that involves a number of companies.

The research income activity of the unit has been demonstrated to be of a good standard.

General recommendations

- Need to consider what is the niche research area for geology at UCC. Clearly, individuals will have their own research profiles, but Geology at UCC needs an identity, and the applied geology linked to ICRAGS should facilitate collaboration that forms the basis of the renewed identity.
- The decision to develop an applied Master's degree appears to be paying off, and as student numbers increase, and industry recognises the value of these students, so research projects and associated income are likely to increase. However, it is important that this is also associated with high levels of research, and that staff do not get pulled into numerous regional studies linked solely to industrial interests, but that lack a good scientific rationale.
- Consider significant reductions in contact teaching time, possibly through delivering a single degree; a community of eight staff can be responsible for no more than one UG degree alongside the Master's degree. Generate one, strong, distinctive geology related degree. Consider a root and branch review of the teaching with the aim of introducing new approaches that free up staff time.
- Enable full IT support for PhD students that is equivalent to staff support; the reality is the students are much more likely to utilise new software than staff, and this should be encouraged, but the lack of IT support hinders this.
- Appoint a Director of Research with responsibilities for identifying opportunities, promoting the research profile externally, and ensuring appraisals are formalised annually, with in-depth consideration of research vision for all staff members including a discussion of individual papers in preparation for publication.

Concluding statement

The research activity of the unit demonstrates significance to the discipline and rigour to a good standard.

Panel E: Plant Sciences (BEES)

Introduction

Plant sciences are an integral component of the shared research mission of the School but this area has relatively few staff members. Moreover, there is little clear identity of plant science research areas within BEES.

There appears to be a general culture of acceptance of relatively low standards of expectation in terms of impact factor of the journals used for publication. This issue should be addressed by the arrival of the new Professor of Plant Sciences, who will start in the coming months.

While the researchers have been successful in maintaining a steady research output and grant income over the reporting period, the appointment of a new Chair in Plant Sciences is critical to the further development of Plant Sciences within BEES.

The staff are highly motivated and have the ambition to achieve greater success in the future but their activities are limited by poor plant growth facilities and basic equipment, as well as few post-doctoral researchers. Essential skills are lost from the labs as soon as PhD students finish and leave.

RAI 1 - Selected published output

While the overall quality of most of the publications is acceptable, none of the submitted publications demonstrates cutting edge research that contributes to major advances in the field. Submitted book chapters and reviews did not provide evidence of excellence. The publications highlighted the diverse focus of research topics of each individual and the team as a whole. The individuals do not appear to have targeted clearly defined research areas in which to establish a track record. There is little evidence of a strong direction of consolidated research endeavour in any one area. There is no evidence of targeting publications to international plant science journals with high impact factors.

The selected published output of the Department has been demonstrated to be of a good standard.

RAI 2 - Total published output

The selected published output reflects an active consolidation of the research endeavour of PhD students through publication in international journals. There are an appropriate number of papers but the overall scores are relatively low.

The total published output research activity of the Department has been demonstrated to be of a good standard.

RAI 3 - Peer esteem

The publications provide evidence of national and international research collaborations.

The peer esteem activity of the Department has been demonstrated to be of a good standard.

RAI 4 - Research-related activity

The researchers have a strong sense of the potential impact of their research, and work together with industries as appropriate to address important issues. However, there was little evidence of active engagement with partner industries or other stakeholders.

The research-related activity of the Department has been demonstrated to be of a good standard.

RAI 5 - Postgraduate research education

The School undertakes a strong and successful teaching program despite the limited number of staff. The numbers of successful post-graduate awards are encouraging, although the time taken to complete PhD theses is too long. Moreover, PhD training potential is limited by poor infrastructure and the absence of state of the art technology platforms and bioinformatics support in particular.

The postgraduate research education activity of the Department has been demonstrated to be of a very good standard.

RAI 6 - Research income

The research income is generally satisfactory, but it is not achieving success in terms of bringing post-doctoral researchers into the Plant Science team. Hence, there is considerable room for improvement. If the publication efforts could be improved in terms of more publications in higher impact factor journals, then it is probable that more funding would be attracted.

The research income activity of the Department has been demonstrated to be of a good standard.

Areas of good practice

Evidence of multidisciplinary research was welcomed

Recommendations for future development

While research output is acceptable the researchers should aim to publish in international journals with impact factors above 5.

There is a serious need for development of basic infrastructure, particularly with regard to controlled environments for growing plant material, autoclaves and basic lab equipment such as qPCR machines. In order to facilitate and enable cutting edge research, appropriate technology platforms should be developed for example around "omics" technologies and bioinformatics, or the possibilities of using such equipment if available in other parts of the University should be explored.

Concluding statement

The research activity of the unit demonstrates significance to the discipline and rigour to a good standard.

Panel E: Zoology, Ecology and Environmental Science (BEES)**Introduction**

The Department of Zoology, Ecology and Environmental Science is largely based on the North Mall Campus, comprising research laboratories, offices and wet laboratories, with access to further infrastructural resources such as the Lough Hyne field station. A site visit to BEES was conducted with a tour of facilities and a general meeting was held with staff and with post-graduate students. Further to this, meetings were held with individual staff representatives. The development of a new centre for marine activity (MaREI) was noted. The positive engagement of all groups with the reviewers was greatly appreciated.

The information provided varied in quality from extensive lists to more "in depth" documentation, including occasional reference to the wider Institutional and governmental context that is important in this case. The evidence provided (RAI 1-3) indicated a range of quality across the unit (good to very good). A number of submissions did not meet the RQR guidelines for original research. There was evidence of developing esteem and international engagement with important new initiatives generating income and increasing international reputation. A common theme emerging across the review will be the heroic effort of staff to deliver research against a background of reducing staff FTEs, increasing student numbers and intensification of individual teaching and administrative requirements. The Panel note that similar comments were made in the previous RQR report and that there is still a systemic problem in this area that strongly impacts the research potential. This is the most significant limitation to the future development of an increasingly respected research portfolio.

RAI 1 – Selected published output

Some staff are performing well and at recognised stands of international engagement, but others may require more support or guidance to improve their research portfolio. In terms of the RQR submission, not all material met the institutional requirements of research (as defined in RQR documents) and more guidance is required for staff to fully understand the process and maximise outcomes.

The selected published output of the Department has been demonstrated to be of a good standard.

RAI 2 – Total published output

Given the total number of staff, the quantity of research output in Zoology, Ecology and Environmental Science was good, especially against the background of present pressures. Three hundred and thirty-three peer-reviewed

papers reported in the RQR period translates to a solid performance in terms of numbers of outputs. Combined impact should be improved and staff might increase their ambition in term of impact/standard of journal.

The total published output of the Department has been demonstrated to be of a good standard.

RAI 3 – Peer esteem

A wide and impressive range of activities among key staff were presented that provide evidence of local and increasing international esteem. Recent awards (e.g. UNEP) are likely to increase this profile and the trajectory is upwards. The opportunity to increase esteem further should be promoted among staff, it is important to make a mark at international level and support for meetings is strategically important. Inviting overseas staff for research sabbatical visits may also help to increase the Departmental profile. New developments such as MaREI can be used to promote this.

The peer esteem activity of the Department has been demonstrated to be of a very good standard.

RAI 4 – Research-related activity

The narrative with the unit report was very helpful but somewhat difficult to assess the relative quality of all ZEEES activity from information provided as separate from BEES but highlights in narrative are impressive and show international leadership in a few cases.

The research-related activity of the Department has been demonstrated to be of a good standard.

RAI 5 – Postgraduate research education

Good progress has been made since the last RQR in terms of the provision for PG students, some examples of good practice here and very positive view from the members of the cohort who appeared to have formed a coherent and supportive group. Progression reviews and the mentoring and structured training are examples of good practice and also the development of the structured degree programmes. Requirement of students to attend conferences is also an example of good practice. The PG cohort is crucial to research output under the present model. However, a drawback that has been voiced by staff was that staff personally supervise multiple students where there are few PDRA appointments to help absorb the workload. In addition, IT support for PG students in BEES is inadequate and falls below expected international standards.

The postgraduate research education activity of the Department has been demonstrated to be of a very good standard.

RAI 6 – Research income

Research income per staff member is holding reasonably steady but there is a slight downward trend in overall terms. This may reflect reduced staff numbers and increasing workload per FTE but there may legitimate concern for the immediate future. There is evidence

of good practice in terms of seeking imaginative and varied funding but heavy reliance of Ph.D. funding to drive the research. We were informed that this may be partially addressed by new funds associated with MaRIE but lack detail of links with existing Departments and units to show how they might benefit. Some long-term funding has been secured for new programs but is there a “pipeline” analysis? What is the success rate of grant applications submitted and what support is provided to staff developing competitive applications?

The research income activity of the Department has been demonstrated to be of a good standard.

Areas of good practice

- Postgraduate provision
- Integration with Institutes
- Flexibility of response in terms of reduced funding resources
- Innovative new programs (UNEP, MarIE)
- Research delivering clear impact and socio-economic benefit

Additional comments on research environment

A major aim of the RQR is to benchmark research performance against international competition. In talking with staff and management some issues arose that are worth consideration when placing UCC against international competitors.

Most research-intensive units now include imbedded research directors/officers whose job is to recognise potential funding sources, support applications and encourage good practice. This role might work across units but is often more effectively embedded with the academics rather than supplied via central services. Staff reported that central support for research grant applications was not efficient and the bulk of the work rested on the PI. More support in terms of costing and administration is usual and would be helpful to researchers in seeking funding. For a research-intensive university, this would be considered as an area of weakness.

Research staff are highly valuable and have been working under increasing pressure due to external factors. Attracting new staff, retaining excellent staff and securing rising stars on fellowship contracts is therefore important. Flexibility and rapidity of response in offering reasonable starting packages, letters of comfort (indication future security after fellowships, based on performance) to outstanding research fellow are common methods practiced across the academic sector. The ZEES activity provided some excellent examples of research with significant impact for society. This was not really featured in the RQR but is an area of departmental strength.

Recommendations for future development

- Release more staff time for research (via reduced contact hours)
- Improved central support for research applications
- Equality of IT provision across the postgraduate cohort

Concluding statement

The research activity of the unit demonstrates significance to the discipline and rigour to a good standard.

Panel E: School of BEES

Concluding statement for the School of BEES

The postgraduate research community in BEES is impressive in its size, enthusiasm and commitment to outreach activities. However, time to completion is high, in part due to inadequacies of infrastructure (see below). Adequate IT provision for research activity must be a priority.

Impact from research is critical and while the overall activity of the School is good with some areas very good, excellence is rare. An increase in the overall quality of research outputs and improved facilities



would be required to raise the RQR profile. With modest investment, improved central support, new cooperative programs and funding (MaRIE) this is feasible. While there have been clear improvement since the last RQR, the comparative global research landscape has also changed and competition and review processes are driving up standards. Universities are now taking active measures to increase impact or at least articulate it more clearly.

Reduction in available external funding for research and internal reduction in staff and supportive services is set against a background of reducing staff/student ratios. This will present the challenge for the immediate future. The past RQR review provided some recommendations for streamlining of provision and some of these have been acted on but it is clear that this type of action may, once again, become a matter for urgent consideration.

It is probable that staff may be disappointed by the outcome of the School review but the international research landscape and the developing impact agenda has meant that international standards are becoming more challenging. The Panel hopes that the information provided by the review process is used in a supportive manner to press forward an improving research agenda.

The research activity of the School has been demonstrated to be of a good standard.

Panel E: Chemistry

Introduction

The Chemistry Department at UCC has a total of 23 academic Staff, one of whom is a teaching-only staff member. Three academic staff are shared jointly with Pharmacy resulting in an overall cohort of 21 FTE. Given the relatively small size of the Chemistry Department in international terms, it is clear that some element of focus is required in terms of breadth of research. Currently the four main research themes are (i) Inorganic and Materials Chemistry, (ii) Atmospheric and Environmental Chemistry, (iii) Separation, Sensing and Analytical Chemistry and (iv) Synthetic Organic and Pharmaceutical Chemistry.

Many of the staff within Chemistry belong to Institutes (e.g. Tyndall National Institute, ABCRF, ERI) and/or are members of large Strategic Research Centres (SRCs). Notable amongst these are the Synthesis and Solid State Pharmaceutical Centre, Separation Science Cluster, Advanced Materials and Bio-Engineering Research, Tyndall, Environmental Research Institute and the Centre for Research into Atmospheric Chemistry (CRAC). The Department considers these Centres to be vital to its research profile and plans to possibly bid for participation in a future Centre based around Advanced Manufacturing.

The Department of Chemistry is located in a region that has a large number of global chemical companies, particularly from the pharmaceutical sector. This situation is of huge benefit to the Department since it provides significant opportunities for funding, industrial collaboration and commercialisation, training, recruitment, industrial placements etc. The Department

has successfully exploited this opportunity through engaging strongly with the pharmaceutical companies especially and undertaking both basic research and more applied development projects.

Since the last RQR in 2009, the Department has developed its research profile in a positive manner by focusing upon its core strengths, particularly in respect of the Research Institutes. For example, 12 of the 23 staff in Chemistry belong to ABCRF with a further five members of ERI and key staff being members of the highly successful Tyndall Institute. These Research Institutes are becoming an increasingly important component of the University Research Strategy, largely as a result of their demonstrated success at securing large infrastructure grants such as SSPC II.

During the period of the review the Department has earned ca. €34M in research funding and has had ca. 80-100 PhD students and 30-40 PDRAs at any one time. Although these research workers are unevenly divided amongst staff, the overall numbers and level of funding are very good and clearly indicate that The Department of Chemistry is in a very vibrant state.

Since the last review the number of publications has increased ca. 2.5-fold with a greater emphasis on open-access publications. In addition to improving the quantity of publications there is also evidence that the quality has increased although staff must continue to strive to target submission of their papers to journals with high impact factors (e.g. JACS, Angewandte Chemie, Nature Chemistry, PNAS, Nature Materials etc.) in order to improve the visibility and international reputation of the UCC Department of Chemistry. Increase the UK the successive REF exercises have encouraged a culture whereby researchers save up bodies of data in order to increase the chances of being able to publish in journals with high impact factors.

Overall the Department has made considerable effort to respond to the recommendations of the previous RQR. These recommendations were based around improving research output, developing more robust methods for self-evaluation and management, and enhancing the postgraduate experience. However, in all three areas much work still remains to be done and the Department should regard all of these areas as 'work in progress' particularly in the area of improving research output where there is still scope for significant improvement which will ultimately improve the research standing.

RAI 1 - Selected published output & RAI 2 - Total published output & RAI 3 - Peer esteem

The Department of Chemistry submitted 23 Category A members of staff and two Category B members of staff. However, of the 23 Category A members of staff it was noted that two individuals were essentially research inactive since they were focusing >90% of their time on teaching, including the development of innovative teaching methods. After consultation it was decided to remove these two individuals from the calculations. The figures below show that for RAIs 1-3, between 68-71% of the staff are performing at a good level or above.

It was noted that some members of staff submitted publications in which their role was confined to making a contribution to a larger team effort rather than leading

the research initiative themselves. In addition, some of the research outputs were reviews rather than original research publications. In future all PIs should aim to submit papers in which they are clearly the intellectual force behind the output and should, where possible, avoid submitting review papers.

Both the selected published output and the total published output of the Department have been demonstrated to be of a good standard.

The peer esteem activity of the Department has been demonstrated to be of a good standard.

RAI 4 - Research-related activity

The Department engages in a wide range of research-related activities including national/international collaborations, consultancies, outreach, industry collaborations, expert assignments, contributing to national scientific policy/strategy. The Department has successfully spun-out a company Glantreo which is now involved in supporting research in ERI & CRAC.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 - Postgraduate research education

The Department of Chemistry currently supports ca. 80-100 PhD students which represents a significant fraction (ca. 8%) of the total the number of PhD students in the University. The young researchers felt that the facilities were generally very good. They expressed a need for support with paper writing and grant proposal preparation. They agreed that quality of publications should take priority over quantity. They felt it would be very useful to have access to some monies for travel to allow them to network.

The postgraduate research education activity of the Department has been demonstrated to be of a very good standard.

RAI 6 - Research income

During the review period, grant funding has been ca. €34M with most derived from SFI but also from other sources including national (EI, EPA, IRC) and international (EU Framework 7, Horizon 2020, industry) funding agencies. This level of funding is particularly impressive against a backdrop of financial difficulties in the country, particularly in terms of Exchequer funding (e.g. abolition of the Research Frontiers Programme). The Department has very strong links with industry, particularly the pharmaceutical sector, and this is an area that appears to be growing with a number of major grants (e.g. SSPC II) attracted recently.

The research income activity of the Department has been demonstrated to be of a very good standard.

Areas of good practice

Links with research centres. The ABCRF is a first class research institute with both excellent research infrastructure and facilities. Staff and students within the ABCRF appear highly motivated and connected with a common sense of purpose. The ABCRF offers excellent research opportunities for collaboration with the large number of pharmaceutical companies that are located close to Cork (e.g. GSK, Merck, Eli Lilly, Pfizer etc.). These companies are primarily focused on API manufacture but have recently developed small Process Research groups to enable greater interaction with ABCRF. The existence of ABCRF was clearly a key factor in obtaining the large SSPC II grant from SFI. Currently 12 out of the Departments' 23 staff are members of ABCRF and one could envisage building on the success of this Facility by making further strategic appointments.

Likewise, the Tyndall National Institute is an excellent example of a Research Institute which brings together like minded researchers to create a facility that is both nationally and internationally competitive. Tyndall currently has 460 researchers including 116 PhDs and an annual research income of ca. Euros 32M. The research scope includes Advanced Materials and Nanochemistry.

Recommendations for future development

The Department of Chemistry has seen a number of recent retirements with no associated replacements and hence there is a real fear that it is losing critical mass. For example, a Chair in Organic Chemistry has been vacant since 2007 and a Technical post in the organic teaching laboratory remains unfilled since 2013. It is there important to make some key strategic young appointments to avoid this future scenario. In view of the proven success of the Research Institutes such as ABCRF and Tyndall, appointments allied to these centres of excellence would undoubtedly increase the research profile of the Department and lead to further enhancement of grant income and associated high quality outputs.

The infrastructure of the Department in terms of environment (e.g. laboratories, meeting rooms etc.) is highly variable ranging from good to poor. Prior to 2008 there had been significant investment in laboratory for centres such as ABCRF, ERI and Tyndall. However, aside from some refurbishment of the top floor of the Kane building, Chemistry has received very little funding for infrastructure. Irrespective of whether laboratories are used for research or teaching, the level of competition from other Universities means that UCC will increasingly suffer should the standard of laboratories and equipment continues to slide. The University has an obligation to maintain the fabric of the Department, both for Health & Safety reasons and also to continue to attract high quality undergraduate and research students.

The Department carries out a substantial amount of important teaching and clearly needs to tension the needs of research with that of teaching, particularly with respect to the aspirations of individual members of staff. Teaching in the 1st year takes up a lot of staff time - there are a lot of courses run for non-chemists which are

important for income in the Department. It would be very helpful to be able to appoint 1-2 Teaching Fellows which would release some staff time for research. It was noted that one the positive side undergraduate applications are improving in quality. The Department should undertake a thorough review of teaching in order to (i) identify ways of streamlining the amount of teaching that is carried out and (ii) evaluate the balance of teaching across members of staff in order to allow some individuals more time for research.

Staff must continue to improve their research outputs on all fronts including publications, patents, Plenary lectures at international meetings, spin-out and start-up companies, consultancies, awards, medals, fellowships etc. The Department should develop a culture whereby all staff, PDRAs and PhD students are working towards maximising the impact of their research which will undoubtedly lead to Chemistry at Cork achieving a higher national and international profile.

Concluding statement

The Department has undoubtedly improved its research profile since the last RQR. Based upon the current trajectory, and with due attention to the recommendations made in this report and those previously, the Department should be striving for, and confident of achieving, a higher grade at the next RQR. The research activity of the Department demonstrates significance to the discipline and rigour to a good standard.

Panel E: ABCRF

Introduction

The Analytical and Biological Chemistry Research Facility (ABCRF) has become a very significant asset to UCC. The facilities are of an internationally high level providing an excellent environment for high quality research. Publication rates are high, postgraduate student numbers are very positive and research income at over €20M during the review period is exceptionally good.

The ABCRF has excellent leadership from the management team who combine strategic vision with the day-to-day running of the facility.

There are 16 academics associated with the ABCRF, 12 of whom are from the Chemistry Department.

The ABCRF has responded well to the recommendations of the last Research Quality Review in 2009, with a significantly improved publication rate, and more diversity in funding sources and interdisciplinary collaborative links. However, additional senior appointments have not been made. A replacement for the Chair of Organic Chemistry has not been made in the eight years since the retirement of the previous post-holder.



RAI 1 - Selected published output & RAI 2 - Total published output & RAI 3 - Peer esteem

The number of publications arising from research conducted within the ABCRF has risen significantly since the start of the review period. There were over 40 publications per year from 2010-2013, although fewer in 2014. It is important that this level of productivity is maintained. A more detailed analysis shows that the majority of publications come from a relatively small number of staff, especially where the corresponding author of the work is considered. This becomes even more noticeable when the authorship of the highest quality publications is examined. Although a good proportion of the publications can be considered to be internationally leading, fewer than ten have appeared in journals with an impact factor greater than 10. Given the quality of many of the research outputs and the fact that around 300 papers have been published during the review period, it is not clear why more work has not been published in higher impact journals. Given the assumption from non-specialists that the highest quality research will be published in journals with high impact factors, more attention should be paid to the choice of journal when publications are prepared and submitted.

The H-index of many staff is lower than might have been expected based on the quality and quantity of publications that they have made. It seems likely that one reason for this is the fact that work has been published in lower impact journals.

Several staff within the ABCRF have been recognised with significant accolades, prizes and awards. The ABCRF Director has recently been elected as a Member of the Royal Irish Academy and is a Board Member of strategically important Councils and Institutes.

Other awards to staff along with poster prizes for postdoctoral researchers and postgraduate students also demonstrate a research vibrancy. Both the selected published output and the total published output of the unit have been demonstrated to be of a good standard.

The peer esteem activity of the unit has been demonstrated to be of a very good standard.

RAI 4 - Research-related activity

The ABCRF has a broad range of research-related activities. In particular, the profile has been showcased by hosting several conferences which provides a good way to advertise the quality of the unit. Outreach activities, especially with local schools are noteworthy. ABCRF staff has engaged well with various external academic activities, acting as referees and external examiners. Collaborations have been successfully achieved with other academics and with industry which have led to high quality research outputs.

The research-related activity of the unit has been demonstrated to be of a very good standard.

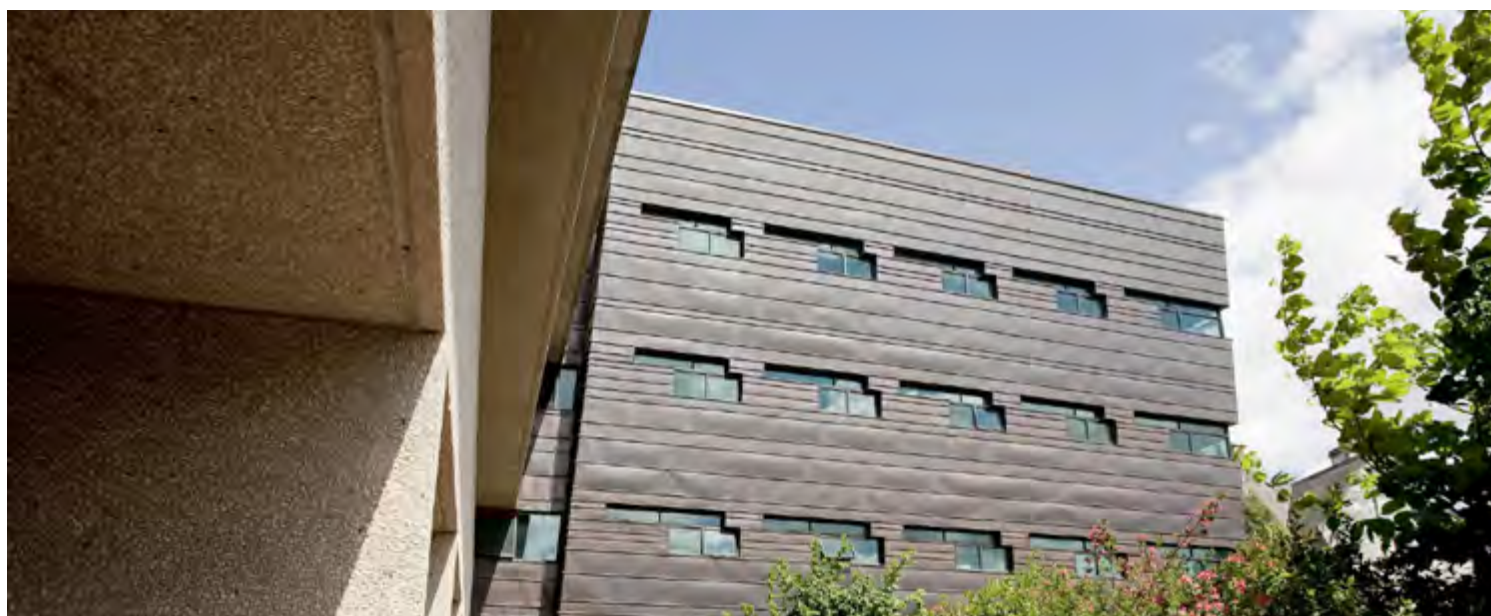
RAI 5 - Postgraduate research education

There are many postgraduate students associated with the ABCRF. There are approximately four PhD students per member of staff, which is higher than for almost all UK Chemistry Departments. PhD students are engaged and enthusiastic about their research environment and clear that there are many job opportunities for them upon completion of their time at the ABCRF.

They have a range of appropriate generic skills courses available to them, along with scientific lectures and attendance at local meetings. Relatively few PhD students appeared to have travelled to conferences that were further afield and they may need more encouragement and support in order to allow them to do this.

The structure of the PhD programme is well thought through and provides a robust education in addition to their interactions with their own research groups. PhD students present posters and give research talks which provide them with the opportunity to develop these skills and also for the audience to have a good understanding of the range of research activity taking place within the unit.

The postgraduate research education activity of the unit has been demonstrated to be of an excellent standard.





RAI 6 – Research income

The ABCRF has attracted considerable funding for research, in excess of €20M during the review period. Staff within the ABCRF has managed to obtain significant funding from a range of sources, including Exchequer, EU and industrial funding. The diversity of funding is a strength and provides a good platform for future research income from a broad portfolio. The pharmaceutical industry in Ireland has not suffered from the problems seen elsewhere in Europe and the ABCRF has engaged well with local industries to secure funding from these sources.

The average income per academic is well over €1M during the review period, although the range of individual performance is wide, broadly in line with publication rates and quality.

The research income activity of the unit has been demonstrated to be of a very good standard.

Areas of good practice

The ABCRF has excellent infrastructure for research with high quality laboratory space and good equipment.

The volume of publications has been steadily increasing, with some staff performing strongly in both the quality and quantity of work that is published.

The provision of a very good educational structure to the PhD programme is a strength of the unit.

The ABCRF has done very well in the amount and range of funding that it has attracted.

Recommendations for future development

With an internationally-leading research facility, some staff are not performing at this level, although several are. Firstly, more outstanding researchers should be attracted to move to the ABCRF in order to enhance the breadth of research being conducted and also to enhance further the overall productivity of the Facility. The ABCRF is a very attractive research environment and it would be relatively easy to bring in leading researchers from elsewhere. Secondly, under-performing staff need to be encouraged and supported to raise the

level of their research activity. This needs more detailed consideration, but a streamlining of teaching would certainly be beneficial. Teaching loads of staff within the ABCRF are unnecessarily high and the number of contact hours could be reduced significantly without any negative impact on the quality of the teaching provision. A strategy for publishing work in higher impact journals needs to be implemented.

Concluding statement

The ABCRF has made considerable progress since the last Research Quality Review, and there are excellent opportunities for attracting internationally-leading researchers to the unit, but this has not happened. It would be almost impossible for the ABCRF to increase its performance without addressing this issue and that of under-performing staff.

The research activity of ABCRF has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel E: ERI

Introduction

The Environmental Research Institute (ERI) has matured from a virtual beginning to a significant and substantive inter-disciplinary research centre to address environmental, marine and energy sciences. The physical infrastructure, participating staff and funding model has encouraged engagement with UCC School members, while the centre has also been responsive to the needs of potential clients, both internal and external to the University. The Institute is at a point of change, with the very recent appointment of a new director, and the imminent opening of the new building for MaREI.

RAI 1 – Selected published output

The selected published output reflects a diverse unit in terms of both subject matter and quality. There is good evidence of multi-disciplinary working. Diversity

in quality was reflected in the scoring of the external reviewers, and with due moderation RAI is classed as 'good' in terms of originality, significance and rigour.

The selected published output of the unit has been demonstrated to be of a good standard.

RAI 2 – Total published output

Publication volume per individual submitted is classed as 'very good'. ERI should consider whether the balance between volume and quality is appropriate and examine ways in which the numbers of truly internationally leading publications could be increased, commensurate with the status and capital investment for the unit.

The total published output of the unit has been demonstrated to be of a very good standard.

RAI 3 – Peer esteem

Individuals in the unit have high esteem across a range of criteria and several have significant roles in policy formulation and industry engagement. A classification of 'very good' is supported by the external review of esteem.

The peer esteem activity of the unit has been demonstrated to be of a very good standard.

RAI 4 – Research-related activity

There appears to be an effective lunchtime seminar series and a commitment to annual research open days aimed at multi-disciplinary, but academic, audiences. ERI did appear to be very effective in facilitating the formation of multi-disciplinary teams. There are a range of public engagement activities. There are a good number of commercially-orientated and policy-informing projects in progress. There is good evidence of coordinating, and collaboration within, multi-partner projects, an excellent example being the hosting of MaREI. There is appropriate evidence of specialist training provision. Within this assessment area, of particular note is the level of societal impact (rather than citation metrics) that is evident, and thus justify a classification of 'excellent'.

The research-related activity of the unit has been demonstrated to be of an excellent standard.

RAI 5 – Postgraduate research education

The number of successful PhD graduations quoted in the Research Statement is commensurate with a 'very good' classification. ERI is recognised and valued by the students as an accessible, multidisciplinary and effective environment within which to pursue research. There should be concern at the average amount of time taken for PhD completion, and measures put in place to facilitate and expect thesis submission within three years (and thus mapping on to the normal duration of funding), and certainly within four years. A good range of taught modules are available but the students suggested that more of these might be made compulsory. There were specific requests from the students for more training in

statistics, and also for more industrially-relevant skills given that only a minority expected to be able to pursue a long-term career in academia. There was concern that a number of project-critical pieces of equipment were only being maintained and run by individuals (often research-funded) on fixed term contracts i.e. there appeared insufficient provision of core, specialist technical support.

The postgraduate research education activity of the unit has been demonstrated to be of a very good standard.

RAI 6 – Research income

There is a diversity of expectation for income generation over the different disciplines represented in the Institute. Nonetheless, given the focus on the scientific research areas research income of around €115K per submitted individual per year is considered to be 'good'. It is recognised that there is strong potential to improve on this performance, particularly once the new MaREI building is fully operational.

The research income activity of the Institute has been demonstrated to be of a good standard.

Areas of good practice

The ERI should be commended as a successful manifestation of a multi-disciplinary, applied research centre that allows the University to lead in this area, to an extent that would have been very difficult within a purely School-driven structure. Of particular note is the engagement with industry and policy formers.

Recommendations for future development

There are specific recommendations for PG students contained in the above. Overall, the ERI needs to continue to provide facility platforms for further use and engagement by School staff. The new MaREI appears to be an excellent example of this type of provision but in the existing ERI building there is a danger that an overly responsive mode to individual staff requirements is limiting the ability to provide truly cutting edge facilities that would need more strategic direction and investment. The published Environmental Research Institute Strategic Plan 2012–2016 provides a good framework for progress but further targeting of research areas, principal investigators, and capability is encouraged to provide clear competitive advantage.

In addition to attractive and focused capability, the provision of embedded research support and development officers should be seriously considered for such a large and important research institute.

Concluding statement

The dominant quality and mean score supports an overall grading of 'very good'. The research activity of the ERI has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel F Report

Units in Panel F

Department of Mathematics
 Department of Applied Mathematics
 Department of Statistics
 School of Mathematical Sciences
 School of Computer Science and Information Technology

Panel F members

Chair: **Professor Jens Knoop**,
 Vienna University of Technology, Austria
 DVC for Mathematics: **Professor Alexander Premet**,
 University of Manchester, UK
 DVC for Applied Mathematics:
Professor (Emeritus) Graham Wilks, Keele University, UK
 DVC for Statistics: **Professor Emmanuel Lesaffre**,
 KU Leuven, Belgium
 DVC for Computer Science: **Professor Mirosław Malek**,
 University of Lugano, Switzerland

Site visit

The site visit was conducted over three days from 2–4 June 2015. It included a meeting with members of the RQR Steering Committee, visits of the School of Mathematical Sciences and the School of Computer Science and Information Technology, and meetings with senior staff members and postgraduate research students.

The site visit ended in the afternoon of the third day with an exit presentation of the principal findings of the Panel. This presentation was made to Heads of Academic Schools/Departments and Research Centres/Institutes.

Introduction

The core activities in connection with the UCC Research Quality Review, 2015, took place between January and June 2015. The report of Panel F relates to the School of Mathematical Sciences, incorporating Mathematics, Applied Mathematics, and Statistics, to the School of Computer Science and Information Technology, and to the Research Centres and Institutes INSIGHT @ UCC, the Cork Constraint Computation Centre (4C), the Boole Centre for Research in Informatics (BCRI), the Centre for

Efficiency-Oriented Languages (CEOL), the Centre for Unified Computing (CUC), and the Edgeworth Centre for Financial Mathematics (Edgeworth).

The review Panel was composed of a Chair and four Disciplinary Vice Chairs for Mathematics, Applied Mathematics, Statistics, and Computer Science and Information Technology. Assisted by remote reviewers for each of these fields, the Disciplinary Vice Chairs and the Chair considered the documentation and the outputs provided by the research units for the review carefully and thoroughly and assessed them according to international disciplinary norms.

The documentation and outputs provided by the research units comprised a research statement and additional data tailored for the assessment of the six research activity indicators considered in the review.

During its visit the Panel had meetings and interviews with the Registrar and Senior Vice President Academic, the Vice President for Research and Innovation, the Director of Research Support Services, the Director of the Quality Promotion Unit, the Head of the School of Mathematical Sciences, the Head of the Department of Computer Science, and the Head of the College of Science, Engineering and Food Science. Additionally, the Panel heard presentations from the Head of the School of Mathematical Sciences, and a representative of the Department of Computer Science including a presentation from representatives of two companies collaborating with the latter. Last but not least, the Panel had meetings and informal discussions with a set of individual staff members and PhD students and postdoctoral researchers.

The Panel found every person in the research units and in the Quality Promotion Unit involved in the assessment process very helpful and ready at all times to openly and frankly answer every question the Panel had. This also applied to the various PhD students and postdoctoral researchers the Panel members talked with.

Scope and context of the review

The Panel assessed the quality of research with respect to six Research Activity Indicators (RAIs) given and defined by University College Cork.

Guided by the Disciplinary Vice Chairs, expert reviewers for their field and the Disciplinary Vice Chairs independently assessed the quality of the research output submitted by the research units for review with respect to the Research Activity Indicators RAI 1, RAI 2, and RAI 3. The Disciplinary Vice Chairs together with the Chair took appropriate measures in order to ensure the integrity, fairness, and objectivity of this reviewing and assessment process and the consistency in scoring. Where necessary, appropriate moderations in scoring were made. In particular, according with the reviewing guidelines set up by University College Cork, special individual staff circumstances such as maternal leave, etc., were taken into account.

Based on the documentation provided by the research units and the findings of the Panel during the site visit including presentations by the research units and meetings with Heads of Schools and Departments and meetings and interviews with staff members and PhD students and postdoctoral researchers, the Panel evaluated the Research Activity Indicators RAI 4, RAI 5, and RAI 6. The Panel discussed its findings and assessments in full detail and to the best of its professional knowledge and reached consensus on the reported scoring of all six Research Activity Indicators RAI 1, RAI 2, RAI 3, RAI 4, RAI 5, and RAI 6, and the final overall conclusion for all research units.

Principal findings

The Panel found good to excellent performance in all research units and areas it reviewed. It also found good international visibility of many researchers of the research units. The research funding overall is impressive though the levels vary between academic units, and between individual staff members.

The Panel considers these varied funding levels to be also the consequence of different funding opportunities due to current funding and programme policies of relevant national and international funding bodies and of differentiated access to funds for research units depending on whether they are oriented more towards basic research or applied research and aiming to attract funds from and cooperation with industrial partners.

The Panel was impressed by the structured PhD programmes and the various outreach programmes ranging from secondary School level education to consultancy activities to close cooperation with industrial partners and the spin-off of start-up companies.

The Panel, however, is also concerned about the generally high (while variable) teaching load in the units it visited, and suggests that consideration is given for reducing it, e.g., by involving Postdocs and qualified PhD students more systematically and effectively in the teaching process of the research units. While the Panel was impressed by the excellent infrastructure, including especially the computing infrastructure of the School of Computer Science and Information Technology, it was concerned about the computing infrastructure of the School of Mathematical Sciences. The Panel strongly recommends to define the needs of the School on computing infrastructure for the foreseeable future and to advance its infrastructure towards the state-of-the-art to be able to carry out research at a world-class level.

Last but not least, the Panel recommends reconsidering the internal processes for approving international PhD students at University College of Cork. The Panel got the impression that formal bureaucratic requirements might discourage especially international students from applying for PhD study at the University. In addition, the Panel recommends improving the internal processes for ad-hoc collaboration with external partners.

Panel F: Mathematics

Introduction

Before the site visit the Panel studied in detail the documentation and outputs provided by the Department of Mathematics. Research quality of individual outputs was judged by four remote reviewers for Mathematics. Each piece of data was analysed by two reviewers and each individual final mark in the categories RAI 1-3 was assigned by the Panel in accordance with the general rules of the assessment. It should be stressed here that all remote reviewers have established reputation in their fields of expertise.

While at UCC the Panel visited the excellent new building housing the Department of Mathematics, including its computer clusters and individual offices, and had a very useful meeting with academic staff, postdocs and PhD students. This visit helped the Panel to fill some gaps in their overall understanding of the unit, especially in regard to RAI 4 and 5 (Research-Related Activities and Post-Graduate Research Education).

RAI 1 - Selected published output

Almost a third of the RAI 1 papers produced by staff at the Department of Mathematics are of outstanding quality. The Panel was impressed that some of the pure mathematical papers are published in top tier journals which is very difficult to achieve. More than a half of the RAI 1 output is of excellent and very good quality.

The selected publication output of the Department has been demonstrated to be of a very good standard.

RAI 2 - Total published output

Regarding RAI 2 contributions, 57% of outputs were ranked as 'very good' and above. Not every paper in this category can be described as ground-breaking, but as a whole they reflect broad interests of the group. It is worth mentioning that some papers are published in general mathematical journals such as *Mathematical Gazette* and *American Mathematical Monthly*. This is an example of good practice as such journals are read by students and teachers worldwide.

The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

Regarding RAI 3, the standard of peer esteem at the unit is very good with exactly 50% of peer esteem activity

ranked as 'very good' and above. Normally, excellence in this category comes with age, whereas the Department mostly consists of young researchers who have not yet obtained the level of esteem of their more senior colleagues. There is only one Professor and one Senior Lecturer in the whole Department and this level of esteem shows that the group is able to attract excellent young researchers. There is a former President of Irish Mathematical Society and an editorial advisor for the London Mathematical Society among the more senior members of the group.

The peer esteem activity of the Department has been demonstrated to be of a very good standard.

RAI 4 – Research-related activity

Regarding RAI 4, the Panel took into account the size of the Department and the age profile of the staff and considers the performance to be of a very good level. Several members of the unit have given a very impressive number of invited lectures in Europe, North America and Asia. There are regular research seminars at the Department and the Panel noted several examples of inter and intra-institutional collaboration. Staff serve as referees for mathematical journals and are actively involved in organising conferences and workshops. It is unfortunate that the University does not have a travel fund for staff to participate in such conferences or go on a research visit. During the second part of the reviewed period the university funding for most basic research supporting activities such as inviting an outside colloquium speaker was no longer available (except for those areas supported by a grant).

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

The overall number of PhD students per member of staff in the Department of Mathematics during 2008–2014 was quite low. The main reason for that appears to be the inadequate funding situation in Ireland, which largely bypasses Mathematics, and unnecessary bureaucratic hurdles which discourage foreign students from applying to UCC. In conjunction with several recent retirements and resignations this led to an increase in the departmental teaching load. Some members of staff even volunteered to teach extra courses otherwise those courses would have had to be discontinued. All of the above is having a negative impact on the discretionary budget at the departmental level and results in inability to support postgraduates by teaching fellowships.

Nevertheless, there is enough evidence that the quality standard of the postgraduate education provided by the Department of Mathematics is very good. The desire to improve is there as well. As an example, SEFS (College of Sciences, Engineering and Food Sciences in UCC) has recently introduced a programme called Research Experience for Undergraduates. Of the ten summer research bursaries across SEFS this year, three are awarded to students from Mathematical Sciences and of these, two are for projects in the Mathematics Department. These two students have been recruited at an early age through an outreach training programme for

the mathematical Olympiad. In the period 2008–2014, students trained at the Department of Mathematics have gone from zero awards to six honourable mentions in 2014 and two medals in international Olympiads (European and Balkan).

The postgraduate research education activity of the Department has been demonstrated to be of a good standard.

RAI 6 – Research income

Regarding RAI 6, the Panel is satisfied with the amount of research income acquired by the Department of Mathematics during the reviewed period and considers it to be of a very good standard. At the present time there is almost no SFI funding for Pure Mathematics and it is commendable that some members of the Department have been successful in securing grants from other sources (national and European). In order to maintain and increase the existing level of funding it is important that strong faculty be retained and promoted and retirements be replaced.

The research income activity of the Department has been demonstrated to be of a very good standard.

Areas of good practice

The most important recent initiative of the Department of Mathematics is the George Boole Mathematical Sciences Conference to be held in Cork on 17–28 August 2015. This is the UCC flagship event of the George Boole Bicentenary and it is planned as a highly interdisciplinary event. It will feature eight major themes ranging from quantum information theory to geometric invariants and moduli spaces and the organisers have secured participation of leading experts in these fields.

Some staff at the Department of Mathematics devote considerable time and effort to deliver mathematical enrichment classes to second-level students and enable Irish participation in the International Mathematical Olympiads. It is hoped that some of their trainees would later return to UCC as PhD students or postdocs.

Recommendations for future development

Issues

During the review period several key members of the Department have retired or resigned. Since these vacancies are not yet replaced the remaining members of staff have to do extra-teaching which adds to their already considerable teaching load. The problem is aggravated by the current lack of SFI funding for Mathematics and the resulting small number of postgraduate students.

Recommendations

It is recommended that consideration be given to:

- Two new appointments replacing the existing vacancies.
- Teaching load reduction possibly through introduction of postdoctoral demonstratorships.

- Retention of key staff through promotions.
- Introduction of new taught MSc programmes as a way to increase the number of postgraduate students both domestic and overseas.

Concluding statement

The Panel is satisfied with the quality of research outputs submitted by the Department of Mathematics and its commitment to promote mathematical research and education nationally and internationally. For that to continue in the future some issues related with teaching load, postgraduate recruitment and staff replacement and retention have to be addressed.

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel F: Applied Mathematics

Introduction

Prior to the research evaluation visit full documentation on the unit and individuals was made available online. This provided ample advanced opportunity to review in depth the standard and status of the research portfolio of individuals within the unit. A very helpful overview of contextual information was also provided by the

unit. Remote reviewers of international repute provided detailed analysis of research publications, both in terms of quality and quantity. Peer esteem evaluations were also provided. During the course of the review in Cork meetings were held with all staff and postgraduate students. This included Skype discussions with two members of the unit who were absent at a conference in Europe.

RAI 1 - Selected publication output

The publications submitted by the unit demonstrated high quality research appearing in internationally recognised, peer-reviewed journals.

The selected publication output of the Department has been demonstrated to be of a very good standard.

RAI 2 - Total published output

The unit has made a substantial contribution to the research literature over the review period.

The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

The unit has made some excellent appointments over the review period. Talented young researchers will add significant kudos to the unit if the research environment allows them to develop their careers to full potential.





The peer esteem activity of the Department has been demonstrated to be of a very good standard.

RAI 4 – Research-related activity

Members of the unit are actively engaged in the promotion of Applied Mathematics both nationally and internationally. The aggregated record reflects significant levels of conference activity – organisation and participation, journal support – editing and refereeing and grant evaluations. Members of the unit have embraced the collaborative ethos of the institution. They help underpin successful grant applications which in turn promote the throughflow of postgraduate studentships, postdoctoral fellowships and research funds. On the basis of these valuable contributions the appropriate rating is very good.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

Current research students commend the unit on its mentoring and monitoring environment and its encouragement to ongoing training over and above their thesis project. This includes further training in subject matter as well as developing transferable skills. Notwithstanding the collaborative supervisions outside the School, the throughflow of students specifically within Applied Mathematics is relatively modest by international standards. Recruitment and support funding is difficult. The unit is conscious of the need to improve in this area. In this challenging context a current rating is good.

The postgraduate research education activity of the Department has been demonstrated to be of a good standard.



RAI 6 – Research income

The unit in recent times has enjoyed prestigious research grants from SFI and the Irish Research Council. The importance of developing further its grant portfolio and the associated additional funds to promote its research ambitions is recognised. Its current record is commendable and is sufficient to justify a rating of very good.

The research income activity of the Department has been demonstrated to be of a very good standard.

Areas of good practice

The members of the unit are to be congratulated on their ongoing and projected collaborative research within UCC. It has evidently promoted co-authorships, co-supervisions and research funding.

Postgraduate training has evolved constructively and is well-appreciated by students currently in the system.

Recommendations for future development

Issues

The unit is concerned to maintain and improve its staffing complement, particularly in view of recent reductions and the imminent retirement of a senior colleague. The issue of staff retention looms large. The talented new appointees will not go unnoticed by those seeking to bolster their research standings.

There are concerns that funding distributions both within the School and the institution may disadvantage the unit in its efforts to deliver research excellence. There is concern that the contribution to central funds based on its large FTE numbers and the associated massive teaching loads is not reflected in resource allocations.

Postgraduate students have a concern over financial hardships they face if they fail to graduate in 3 years. Is there perhaps a case for some alleviation of their difficulties?

Recommendations

The unit’s research portfolio has a limited European dimension – are there opportunities here for integration into large scale research collaborative teams which could enhance external funding for research, increase postgraduate activity and international conference participation?

At institute level, the question of staff retention may need some creative thinking. Limited promotion opportunities leaves the unit exposed to external, including international, recruitment overtures.

The institute has embarked on an internationalisation initiative. Within this initiative the unit should explore opportunities for overseas recruitment at under-graduate and postgraduate levels as a possible source of additional funding.

Concluding statement

There is ample evidence of good strategic leadership and commitment to research excellence in the unit’s submission despite ongoing difficulties with staffing, post-graduate recruitment and internal funding.

The unit has a strong record of quality publications in internationally recognised journals and constructive collaborations both internally and externally. Within financial constraints the unit promotes its stature in the wider community of Applied Mathematics with numerous conference presentations and seminar invitations. Members of the unit further serve the discipline with extensive reviewing, refereeing and examining duties.

Weighted Rating	QUALITY LEVEL				
	Excellent	Very good	Good	Fair	Poor
%	0	85	15	0	0

This is a vibrant, focused unit deserving of the University’s ongoing support and encouragement. The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel F: Statistics

Introduction

Throughout the review period the staff of the Department of Statistics consisted of 10.5 staff members comprising one Professor, 0.5 Senior Lecturer (together with UCC Department of Epidemiology and Public Health), seven lecturers and two researchers.

The Department focuses its research and teaching on applied statistics. The Department covers a relatively broad range of application areas in which it aims to contribute significantly. The research strategy of the Department is therefore aligned to the following areas: Biomedical Imaging, Biostatistics, Networking and Information Technology, and Actuarial Science. This open attitude towards application areas is reflected in the collaboration of the Department in teaching, training, consultancy and research with many other departments inside and outside UCC.

- Undergraduate teaching, the Department participates in the BSc Financial Mathematics and Actuarial Science and the BSc Mathematical Sciences. Furthermore, the Department runs a Higher Diploma in Statistics. In addition to the above teaching programmes the Department has also engaged itself into a BSc on Risk and Actuarial Studies with the Beijing Technology and Business University (BTBU), Beijing, China.
- Postgraduate training, the Department is involved in the training of MSc students across UCC. Furthermore it launched in 2013 two Master programmes, one in Actuarial Science and one in Data Science and Data Analytics. In the period of the evaluation, there were three PhD students at the start and ten PhD students at the end.
- Consultancy and joint research, the Department collaborates with various departments of UCC and research centres. Limited collaboration was established with the industry. However, these collaborative efforts have rarely led to innovative statistical research.

RAI 1 - Selected published output

Overall, three external reviewers evaluated the selected published output (up to five best papers), total published output for the period 2008-14 and peer esteem. Note that two staff members were left out from the evaluation since they only recently joined the Department and initiated their PhD research also recently.

Based on the 45 (9 staff members * 5) best publications, 51% scored very good or higher. The selected published output of the Department has been demonstrated to be of a very good standard.

RAI 2 - Total published output

Furthermore, 55% of the total published output of staff members was assessed by the Panel to be very good or higher. The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 – Peer esteem

Finally, 55% of the peer esteem activity was assessed by the Panel to be very good or higher. The peer esteem activity of the Department has been demonstrated to be of a very good standard.

Research Activity Indicator	QUALITY LEVEL				
	Excellent	Very good	Good	Fair	Poor
RAI 1	20%	31%	38%	0%	11%
RAI 2	22%	33%	33%	0%	11%
RAI 3	11%	44%	33%	0%	11%

RAI 4 – Research-related activity

The Department showed involvement to a varying extent in (1) peer-review process of research articles; (2) presentation at meetings and conferences; (3) (inter)national (statistical) societies; (4) organisation of meetings (national and international conferences); (5) research collaboration within and outside UCC and (6) participation in (inter)national collaborative efforts. The Panel assessed the research-related activities of the Department as very good. The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

The Department is quite active in a number of Master programmes. In addition, great progress has been made in the training of PhD students (from three to ten in the review period). Taking into account the 10.5 staff members in the Department throughout the review period, the Panel assessed the Department on this aspect as 'very good'. The postgraduate research education activity of the Department has been demonstrated to be of a very good standard.

RAI 6 – Research income

Major grants were obtained by the Department especially on the biomedical imaging research activities. Members of the Department were also involved in biostatistics grants, but it appears to be harder to secure funding for the Department in this context. It must be said, though, that the information provided does not give a clear picture of the total amount of resources obtained by the Department via grants and external collaboration.

The research income activity of the Department has been demonstrated to be of a very good standard.

Areas of good practice

Three activities of the Department stand out as areas of good practice: (1) Research: The Dynamic Imaging Group is producing top quality high quality papers, receiving major grants and attracting most of the PhD students of the Department. (2) Collaboration: The



Department shows a great involvement in collaborative efforts especially in clinical research. (3) Teaching: The Department is contributing significantly in undergraduate and postgraduate teaching.

Recommendations for future development

- Excellent research is done in especially biomedical imaging, but the Panel suggests setting up extra research lines in statistics in the context of the intense collaborative efforts with other departments and/or external organisations. This might be achieved via joint PhD projects in statistics.
- A lot of consultancy is already done on a voluntary basis, taking time off for statistical research. A suggestion is to (re-)install a statistical consultancy service on a paid basis with dedicated personnel paid by the consultancy fees. This may create extra resources and might also generate new research lines for the Department.
- The Panel recognises the generally high (if variable) teaching load for the staff members of the Department. One might therefore aim for a better teaching/research ratio. This might possibly involve post-docs, on-line teaching or blended learning.

Concluding statement

The Panel recognises the excellence of statistical research in the Department, but believes also that the Department may exhibit more high level statistical research via the existing collaborative efforts. For this to happen, the Panel advises to look for ways to reduce the teaching load.

Weighted Rating	QUALITY LEVEL				
	Excellent	Very good	Good	Fair	Poor
%	0	100	0	0	0

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel F: School of Mathematical Sciences

The School of Mathematical Sciences is comprised of the Departments of Mathematics, Applied Mathematics, and Statistics. Its strength and perception within University College Cork and outside is an outcome of the strengths and perceptions of its forming departments. The research activity of the School as a whole has been demonstrated to be of a very good standard.

Assuming this outcome to be a direct function of the strengths and perceptions of its forming departments suggests computing a final overall score for the School of Mathematical Sciences as a whole analogously to the computation of the final scores of its forming departments using their scores as the computational basis. Assigning for this purpose each Department the same weight, i.e., 1/3, with the Research Activity Indicator RAI1 having thus a weight of 25% and RAIs 2 through 6 a weight of 15%, as for the computation of the final overall scores of the Departments, the Panel would give a final assessment of 'very good' for the School of Mathematical Sciences.

It is worth noting that this final overall score of the School of Mathematics is invariant with regard to assigning other weights to its three Departments, since they were all individually assessed as 'very good'. In the view of the Panel, this might make questionable any additional informative value of the overall score of the School of Mathematical Sciences since it expresses the obvious. An additional value might also be challenged by the question if it is the School of Mathematical Sciences which is perceived as the relevant research unit, or if it is its Departments, with the School of Mathematical Sciences being perceived as an organisational unit hosting them. The latter question might have different answers within and outside University College Cork. Answering it was not part of the agenda of the Panel.

The Panel considers the final overall assessment of the Departments and the data and reasoning leading to them more informative and important than the final overall assessment of the School of Mathematical Sciences as it is merely the outcome of evaluating a formula.



Panel F: Computer Science and Information Technology

Introduction

The School of Computer Science and Information Technology comprises 26 staff members with 25 full time equivalents (FTEs) as two lecturers work half time. The School strives to be the best in research in Ireland and become one of the best in Europe. The potential is there, as in some areas, the School is at the top already, and this report is aimed at pointing out a number of positive developments and some aspects that could be changed in order to further improve research quality and productivity.

RAI 1 – Selected published output & RAI 2 – Total published output & RAI 3 – Peer esteem

Staff Composition: with 26 staff members the structure is overall well balanced with six Professors, eight Senior Lecturers, 12 lecturers (two part-time), five research fellows with 25 postdoctoral researchers and 35 PhD students plus 14 administration and support. The Panel is of the opinion that the School has the capacity to increase the number of PhD students provided the staff teaching load is reduced. It is good practice at the top universities to have postdoctoral researchers involved in teaching (e.g., at the level of 4 ECTS per semester for postdocs with PhD students helping with labs and assisting with teaching).

Research output: the research is dominated by two clusters, decision support and media (including human interface) and clouds, networks and computers. The School would benefit from two additional faculty positions to strengthen research on computer security (funding for this type of research grew almost exponentially in the last few years), Internet of Things and database to connect to current strengths on data analytics and cloud computing.

The Panel views about 2/3 of the research published outputs at the levels ranging from 'good' to 'excellent' with some outstanding work. About 1/3 of outputs are below such standard and there are also some inactive staff members. There are very few staff members that are in the category of overachievers and drive the research initiatives of the School. This creates a certain risk that if they move or retire the sizable group of researchers can be affected. The Panel suggests fostering some programmes to support young, brilliant researchers by hosting, for example, ERC grant recipients who can then continue at CSIT.

The selected published output of the School has been demonstrated to be of a good standard.

The total published output of the School has been demonstrated to be of a very good standard. The peer esteem activity of the School has been demonstrated to be of a good standard.

RAI 4 – Research-related activity

Several faculty members are actively involved in

multidisciplinary research and promotion related activities. A number of faculty members are involved in the Boole Centre and National Centres like The Centre for Future Networks and Communications as well as an Ireland's Software Research Centre. With over 80 industrial collaborations the School has a potential for attractive and successful startups. The Panel found two presented startups (Keelvar and Treemetrics) impressive and recommends intensification of effort in technology transfer in close cooperation with the UCC Technology Transfer Office.

Faculty members of the School also take part in research-related activities such as chairing international conferences, serving on journal editorial boards, etc. However, these activities are not currently uniformly distributed and are concentrated in a small number of staff. The School should encourage all members of staff to take part in research-related activities appropriate to their research area and career stage.

The research-related activity of the School has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

Graduate students and postdoctoral researchers are well motivated and enthusiastic about their research and many of their contributions are excellent. The Panel was impressed by students' eagerness to research and teach. There is a potential to further increase the number of PhD students and overhead funds should be used to attract the top talent.

The postgraduate research education of the School has been demonstrated to be of a very good standard.

RAI 6 – Research income

The Panel is positively impressed with the level of funding and rates it at the highest level. The funding is acquired mainly by two research groups and more diversification would be welcomed. The Panel commends diversification in the sources of funding and impressive growth ratios in EU and industry funding but clearly there is a potential to at least double the funds in industrial portfolio that already boasts collaboration with 80 companies but still waits for some sizable grant.

The research income of the School has been demonstrated to be of an excellent standard.

Overall assessment

Research Activity Indicator	QUALITY LEVEL				
	Excellent	Very good	Good	Fair	Poor
RAI 1	9%	27%	27%	0%	0%
RAI 2	13%	39%	18%	0%	0%
RAI 3	19%	11%	28%	0%	0%

Areas of good practice

The School has several good practices that should be continued:

- Promotion and attracting talented graduate students;
- Successful procedures in attracting grants at the national and EU level;
- Using overhead to improve areas that need support;
- Industrial collaboration;
- Excellent infrastructure.

Recommendations for future development

The Panel recommends improving the number of publications in the top category and take measures to retain key staff members through promotions and other mechanisms. The number of high impact publications is limited and the lower end of the quality scale needs to be moved up. Research output should be monitored on an annual basis and chair’s office should encourage and help underperforming researchers. Listed below are several issues that the Panel has identified and proposes the ways to solve potential problems in order to further enhance research output and competitiveness of the School.

1. Teaching load: Teaching load is too high in comparison to other universities: the Panel proposes to involve postdoctoral researchers and PhD students in the teaching process. This will also boost their academic careers if they choose to become academics. A small load of 4 ECTS per semester would result in reduction of faculty teaching load. Also a concept of MOOCs, blended or reversed classrooms should be considered.
2. Faculty positions: As mentioned earlier the Department would benefit from two additional faculty positions to strengthen research on computer security, Internet of Things and/or database to connect to current strengths on data analytics and cloud computing. Clear distinction among the possible faculty positions: Professor, research Professor and teaching Professor (same for lecturers, Senior Lecturers, etc.) would unify research quality evaluation and make it fairer as purely teaching staff would be exempted from research evaluation.
3. Diversification in terms of funding: The focused efforts should be made to enter even more EU projects as they do help in building reputation and enhance visibility.
4. Networking events: More networking events to enhance connectivity and dialogue among graduate students and postdocs from different research groups would be welcomed. Example: high level seminars of interest to everyone with follow up refreshments. PhD research series, postdocs at CS, etc.
5. Building opening hours: Faculty and students are happy and proud of their building and research infrastructure. One concern was with respect to the opening hours and extending them would be welcomed especially by graduate students and Postdoctoral Researchers.

6. Future evaluations: For future evaluations consider compiling one or two page documents for each faculty member, giving a short bio, career steps, five most important publications that they are most proud of and research-related activities. It would tremendously ease the task of the reviewers and lead to a better assessment. Also, the scoring system should be revised. The Head of the School should help the underperforming faculty in their development.

Concluding statement

All in all, the School of Computer Science and Information Technology has potential to grow and continue with some excellent achievements in a couple of focused area. There are several research activity indicators that can be improved. The faculty should not rely on a couple of research groups that are outstanding as the risk to the School is too high and should be leveraged with expanding in other areas and building new clusters of excellence while maintaining the established ones.

Based on information received for RAIs 1, 2 and 3 that is selected published output, total number and quality of publications for the period 2008-14 and peer esteem the final assessment is very good, achieved by combining all indicators from RAI 1 to RAI 6 (see the table) and using the formula as prescribed by the University.

Weighted Rating	QUALITY LEVEL				
	Excellent	Very good	Good	Fair	Poor
%	15	45	40	0	0

The research activity of the School has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel G Report

Units in Panel G

School of Engineering, incorporating the disciplines of
 - Civil & Environmental Engineering (CEE)
 - Electrical & Electronic Engineering (EEE)
 - Process & Chemical Engineering (PCE)
 Department of Physics
 Tyndall National Institute

The activities of the following Research Centres and Institutes were also reviewed:
 Cleaner Production Promotion unit (CPPU) (reviewed within Engineering)
 Collaborative Centre for Applied Nanotechnology (CCAN) (Tyndall-led)
 International Energy Research Centre (IERC) (Tyndall-led)
 Microelectronics Competence Centre Ireland (MCCI) (Tyndall-led)
 Photonic Integration from Atoms to Systems (PiFAS) (Tyndall-led)
 Irish Photonic Integration Research Centre (i-PIC)
 Centre for Hydrology, Micrometeorology and Climate Change (ERI Centre)
 Informatics Research unit for Sustainable Engineering (IRUSE)/Information and Communication Technology for Sustainable and Buildings Operation (ITOBO)
 Beaufort Laboratory incorporating (ERI Centre):
 Hydraulics & Maritime Research Centre (HMRC), Marine Renewable Energy Ireland (MaREI), Sustainable Energy Research Group

Panel G members

Chair: **Professor Matt Griffin**, Cardiff University
 DCV for Civil and Environmental Engineering:
Professor Charles Augarde, Durham University
 DVC for Electrical and Electronic Engineering:
Professor Michiel Steyaert, KU Leuven, Belgium
 DVC for Process and Chemical Engineering:
Professor Peter Fryer, University of Birmingham
 DVC for Physics: **Professor Colin Latimer**,
 Queens University Belfast
 DVC for Tyndall: **Professor Richard Penty**,
 University of Cambridge

Scope and context of the review

The review followed closely the UCC RQR guidelines. Disciplinary norms for the Panel G subject areas were agreed by the Panel. Remote reviewers' scores were used as the basis for RAI 1-3 grades. Scores were checked for consistency and appropriateness by the relevant DVCs and were moderated if necessary. In some instances, the DVCs themselves reviewed papers, individuals' IRIS profiles, or other information.

The Panel worked as a coherent team, with the evaluation of each unit considered by all members of the Panel as a group, with the discussion and analysis led by the appropriate DVC. At least two Panel members visited each unit, viewing facilities, and meeting staff and PhD students. These visits were extremely interesting, instructive, and beneficial for the work of the Panel. The presentations and questions-and-answer sessions involving the senior University team were also very useful, although not as useful as the meeting with the units - a slightly different balance with a bit more time devoted to site visits would have been better.

The documentation provided by the Schools was generally useful, although of variable quality. Disentangling the complex financial and academic relationships between the Departments and the institutes was difficult.

Scores were calculated using the methodology given in the guidelines. The Panel has attempted to express its most important conclusions and assessments in the text of this report, and stresses the fact that, while the numerical scores are valid as quantitative indicators of quality, taken on their own they would constitute a crude and simplistic evaluation.

The Panel received good support from the RQR team, although it noted that the team seemed rather small given the complexity and workload involved, and would recommend a larger support team be put in place for future such reviews.

Panel G: School of Engineering

The Panel was asked to consider the School of Engineering as a unit, and to look in detail at the disciplines of Civil and Environmental, Process and Chemical, and Electrical and Electronic Engineering. The Panel noted and was impressed by the successful reorganisation and consolidation of Engineering in recent years under the auspices of a unified School structure. The structure now appears stable, and constitutes a good platform for further development with a focus on modern research and teaching programmes for which the traditional disciplinary boundaries will not necessarily be well adapted. The School has a number of challenges ahead: the task of integration of the disciplines is not yet complete; research income levels are low; better staff development and mentoring is needed to raise research performance; and the School would benefit from a comprehensive review of teaching programmes and delivery. The School should continue to foster a culture of interdisciplinary working via seminars, brainstorming of new research ideas, and even social events to generate a better and mutual understanding and cross-fertilisation of an interdisciplinary approach that is increasingly important for contemporary engineering.

Grade	Excellent	Very good	Good	Fair	Poor
% at grade	0%	31%	61%	6%	2%

The research activity of the School has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel G: Civil and Environmental Engineering

Introduction

Civil and Environmental Engineering (CEE) comprises 12 Category A and four Category B staff of which 12 in total have been returned for the RQR (11 Category A and one Category B). Staff in the unit undertake research across a broad spectrum, including renewable energy (biofuels, marine, wind), informatics in building management, hydrology, carbon in soils & structural engineering. The range of interests is unusual for a traditional civil engineering Department but fits well with the future direction of a unified School of Engineering, and many of the current staff in CEE already collaborate in cross-disciplinary research in the School. Many CEE staff are also linked to the Environmental Research Institute (ERI) at UCC which is reviewed in another Panel, and others have significant links to other research Institutes and Centres.

RAI 1 – Selected published output & RAI 2 – Total published output & RAI 3 – Peer esteem

The papers submitted under RAI 1 include some excellent research outputs. Highlights are publications in international peer-reviewed journals on soil carbon uptake, wind power forecasting, biofuels, energy modelling and structural health monitoring. The outputs demonstrate very good levels of research competence in areas both linked and not linked to the UCC Research Institutes and Centres, which reflect the talents of the staff involved. In some areas, however, the level of research outputs is disappointing, particularly in ICT in building monitoring and modelling (under the auspices of IRUSE, which has nonetheless been successful in terms of funding). In relation to this, the 2009 RQR report for CEE states “The challenge for the IRUSE group ... is to translate this large amount of funding and supported graduate students into a significant number of high-quality research publications presenting significant and validated insights from the funded research.” From the evidence presented to the Panel at this RQR, this objective has not been achieved.

The overall scores from the Panel for RAI 1- 3 for CEE are somewhat reduced by the presence of a number of zero scores, due to non-submissions by staff, which is unfortunate. It is not clear why some staff chose not to submit publications for RAI 1 as in some cases they clearly had publications to submit, as evidenced by information found elsewhere on the web. In most cases staff made good use of the IRIS system, allowing the Panel to assess the RAI 2 and RAI 3 scores from reviewers; however, once again there were gaps which made positive assessments difficult both for the Remote Reviewers and the Panel.

As noted above, staff in CEE work closely with or are integral parts of UCC research Institutes and Centres, notably the ERI (which is assessed by another Panel). Research Centres/Institutes linked to Panel G in the RQR Guidelines, relevant to CEE and not reviewed elsewhere are commented on below: The Cleaner Production Promotion unit (CPPU) appears to have good industrial links and is a partner in an active FP7 project “UMBRELLA”.

The Informatics Research Unit for Sustainable Engineering (IRUSE) is featured at various places on the UCC webpages but much of the information on the pages is out of date. “ITOBO” also appears, but seems to be a completed SFI-funded project, comes under the ERI on the web and also the Tyndall Institute because there are other researchers based at those Institutes and outside CEE. This is understandable but did make it rather confusing and difficult for the Panel to work out “ownership”. IRUSE has not delivered as many high quality research outputs to date as might be expected given the funding received and the number of students graduated (as flagged in the last RQR). CAMPUS21 is a current project for which more up-to-date material is available on the web. It is coordinated at UCC by IRUSE and due to finish this year.

The Beaufort Research Centre has subsumed the work of some previously named centres/groups (Hydraulics and Maritime Research Centre (HMRC), the Coastal and Marine Research Centre (CMRC) and the Sustainable

Energy Research Group SERG), and is also linked to the SFI-funded Marine Renewable Energy Ireland (MaREI) Centre, launched in 2013. A key new building for MaREI is nearing completion outside Cork, and will constitute an outstanding facility for marine energy research, promising to be a strong source of high-impact research outputs and attracting funding for years to come.

The Centre for Hydrology, Micrometeorology and Climate Change (HYDROMET) has a good track record of research funding, and is led by one member of staff in CEE.

At various other places in the documents submitted by CEE and on staff profiles, other groups are mentioned, e.g. the Research Unit for Structures and Optimisation (RUSO), but there is little detailed information to assess the research activity of these groups.

The key research activities in CEE depend on research facilities located off-site, such as the Beaufort facilities mentioned above, field sites for soil monitoring, and IT space for IRUSE. The buildings housing CEE staff on the main UCC site do not themselves host very much in the way of research activity at present, being mainly devoted to teaching. There appear to be limited opportunities for research-led teaching in the sense of making use of research facilities, for final year undergraduate projects, for instance. Potentially good small research spaces do exist in the School buildings, perhaps for small scale geotechnics testing, materials and structures research (e.g. health monitoring), and this may be something that CEE can develop depending on future hires (e.g. the current geotechnical post).

The selected published output of the School has been demonstrated to be of a good standard. The total published output of the School has been demonstrated to be of a very good standard. The peer esteem activity of the School has been demonstrated to be of a good standard.

CEE grades for RAI 1-3 are tabulated below.

Indicator	QUALITY LEVEL					
	Excellent	Very good	Good	Fair	Poor	O
RAI 1	12%	37%	23%	8%	2%	19%
RAI 2	25%	29%	21%	21%	4%	0%
RAI 3	21%	17%	21%	38%	4%	0%

RAI 4 – Research-related activity

Under this RAI the Panel considered international collaboration and industrial links of particular importance for judging the engineering units. With this in mind, consulting the research-related activities document and IRIS entries, the Panel concludes the following for CEE.

Six staff are operating at good to excellent quality levels in terms of international collaboration. They are

especially strong when it comes to energy-related research having a number of large grants, substantial EU funding, and links to many European partners. Links beyond Europe are less plentiful with the majority held by two staff. In terms of industrial links, the evidence suggests a slightly lower level of activity, mostly carried by the same group of six staff. The remaining staff have weaker profiles under RAI 4 and either have no entries in the research-related activities document (and nothing useful in IRIS), or the information presented is not well-justified (e.g., long lists of collaborators but without clear indications of research delivered).

The research-related activity of the Department has been demonstrated to be of a good standard.

RAI 5 – Postgraduate research education

For this metric the Panel consulted the RAI 5 document provided by the School and the Research Statement (which contains similar information). The RAI 5 document (p. 2) gives currently funded PhD numbers for the whole School and does not provide a breakdown into CEE and the other units. It is not clear why there is such a breakdown for MSc-by-Research students. It would have been useful to have this information. Although the RQR guidelines indicated that information would be available on PhD completion rates and completion times, the Panel did not receive this information, which would have been very instructive. The number of PhDs graduated in the past five years is given as 33 for the area “Civil, Environmental and Energy Engineering” (it is not clear why “Energy” appears here).

With 11 research-active Category A staff returned, this means each staff member has had on average three PhD graduates over the five years. The Panel regards this as being average for civil engineering given the funding climate in the period, but perhaps a little on the low side if energy research is considered (an area with much more funding for PGRs). IRIS and other documents indicate that (as is common) a small number of supervisors are graduating the majority of students.

The document was rather sparse on both supervision and postgraduate training but during the visit the Panel found that procedures were in place and well-understood by both staff and students.

The postgraduate research education activity of the Department has been demonstrated to be of a good standard.

RAI 6 – Research income

The document provided implies that CEE income (not linked to Institutes) is on a decline from a high in 2010 of €3M to €1M in 2013. It would have been useful to know if there was a major grant in 2010 that skewed a general level of about €1.5M p.a. (the final column in the Table states it to be the sums of other entries in the rows but the figures are incorrect). IRIS entries indicate that the main grant winners appear to be six staff members although it is difficult to untangle funding won by these staff from that which is “domiciled” (UCC wording) in the Institutes. It would be good to have a breakdown of the figures in Table 4 against each staff member.

With 11 Category A staff being returned, the €1M sum for 2013 is rather low for civil engineering and on an even lower level for energy-related research. However, it is clear that some staff in the 11 are bringing in zero funding while others are performing at a high level. This is not unusual for an academic Department in engineering. The research income activity of the Department has been demonstrated to be of a fair standard.

Areas of good practice

The Panel notes the high quality research outputs generated by CEE staff, and the excellent off-site research facilities available to them, especially MaREI. EU funding is good, and there is a strong cross-disciplinary research culture.

Recommendations for future development

It is clear that CEE supports a larger number of programmes and students than other units in the School, and given the hoped-for upturn in the Irish economy, student numbers in CEE may increase back to levels seen in the mid-2000s. The unit has not to date been able to replace three key staff who have left, although one post is currently advertised, and in consequence has struggled to deliver programmes with temporary staff and postgrads. This is not a sustainable arrangement and is an issue affecting staff morale (there are really only seven CEE staff available to deliver the CEE programmes). The Panel strongly recommends that the School be allowed to recruit to bring its CEE teaching cohort back to a sustainable level. This will also positively improve research capabilities. Ignoring this will only lead to future problems and a potential decline in research quality. Other important measures that the Panel recommends to enhance research quality and productivity are (i) accommodation of some research activities in the buildings on the main UCC site, (ii) mentoring and support of junior staff who have yet to apply for large grants, (iii) an active process to ensure that all funded projects lead to high quality research outputs. CEE staff should also ensure that they utilise the opportunities provided by IRIS and future RQR exercises to demonstrate their achievements and potential. Staff with lengthy RAI 4 entries under collaboration should consider consolidating to smaller numbers of more focused and high quality research collaborations, which are likely to deliver good research outputs.

Concluding statement

CEE is a unit in transition which is, and should continue to be, an extremely important part of the School of Engineering, particularly as many staff already cross engineering sub-discipline boundaries. Despite reductions in staffing and high teaching loads, CEE has continued to produce some excellent research outputs, but there are some staff members whose performance has not been at a high level, lowering the overall average. It has proved difficult to see the exact picture on both PhD students and income, but both appear in need of improvement.

The final overall profile and grade for CEE are as follows:

Grade	Excellent	Very good	Good	Fair	Poor
% at grade	0%	15%	70%	15%	0%

The research activity of the CEE demonstrates significance to the discipline and rigour to a good standard.

Panel G: Electrical and Electronic Engineering

Introduction

Electrical and Electronic Engineering consists of 15 academic staff members (three Professors, six Senior Lecturers and six lecturers), one administrative, five technical and one support staff. This healthy spread of academic staff levels should provide in the long term a good flow through in the different levels via promotions, to maintain the quality and support of the research group and their researchers.

RAI 1 - Selected published output

Half of EEE selected published outputs were assessed at very good or above, with 85% assessed at 'good' or above. The selected published output of the Department has been demonstrated to be of a good standard.



RAI 2 – Total published output

A similar picture is seen in total published output with figures of 50% and 77% respectively. The total published output of the Department has been demonstrated to be of a good standard.

RAI 3 – Peer esteem

For peer esteem, 40% of peer esteem activity was assessed as very good or above with 75% assessed as good or above. Of the 15 staff members, around a quarter can be considered as performing at a high level, of which three of are excellent (good active research activity, publication in good journals, good past performance) and one with a very good developing profile. However, another quarter does not rank so highly. It is not clear if this is due to the considerable teaching loads on EEE staff or to other issues. We note that most of the EEE researchers are associated with research institutes.

The peer esteem activity of the Department has been demonstrated to be of a good standard.

EEE grades for RAI 1-3 are tabulated below.

Indicator	QUALITY LEVEL					
	Excellent	Very good	Good	Fair	Poor	0
RAI 1	7%	41%	35%	12%	3%	1%
RAI 2	3%	43%	27%	23%	3%	0%
RAI 3	13%	23%	37%	17%	10%	0%

RAI 4 – Research-related activity

Seminar series, public engagement and specialist training encompass very well balanced and broad activities. From the discussion and information provided during the Panel visit, it was clear that the research students do feel the correct balance between fundamental research, independent research and the possibilities to develop their own research skills. This is also reflected in the wide range of staff activities in conference organisations, editorial boards and professional bodies.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

Over 40% of the School of Engineering PhD students work in the EEE area. This is a very good indication of the current activity and for the promise of continued excellent research. It also requires a considerable effort from the EEE top staff academics in guiding and supporting those researchers. Regarding the output (publications) and discussions during the meetings, it seems that the staff can balance this in a very good way. Also the ability to develop research skills and postgraduate training opportunities seems well in place and appreciated by the researchers. Possibilities

for research decimation (conferences, publications, attending conferences) are well in place and supported and again well appreciated by the researchers.

The postgraduate research education activity of the Department has been demonstrated to be of a very good standard.

RAI 6 – Research income

EEE research funding is back on track and for 2013 constitutes around 2/3 of the total research funding of the School. However, since many of the researchers are associated with research centres, it is not clear how this is counted related to the income of or via the research institutes. The split between government funding, EU-funding, and direct funding was not clear from the data provided. The impression is that it is mainly local funding (or perhaps that the non-local funding is masked or counted exclusively in the research institutes) and that there is scope for enhancing EU funding and international industrial collaboration. The very high level of IRCSET scholarships achieved (over 75% of the total scholarships within the School) is a very positive and indication of the quality of the active research, but could result in a heavy load for the research active staff members.

The research income activity of the Department has been demonstrated to be of a very good standard.

Areas of good practice

As described above, postgraduate research support is good and is clearly appreciated by the students. There is also a good balance between fundamental research, independent research and skills development.

The high level of staff activity in conference organisation, editorial boards, and professional bodies contributes to the reputation of the individuals, the School and the University.

The practice of concentrating research within the research centres has certainly been a major factor in promoting front-rank EEE research, although, as a result, little research activity is in place anymore in the EEE School itself. This is acceptable as long as the research institutes continue to be seen both internally and externally as part of the University.

Recommendations for future development

This research institute approach has been demonstrably successful for EEE research, and serves the important agenda of supporting industry. But attention also needs to be devoted to the balance between short-term industrially related research and longer-term and more fundamental investigations. An exclusive focus on short-term, application-driven research will not always result in inspiring new ideas and in achieving prominent publications in high-impact journals and conferences publications. As well as being a key contribution to the academic reputation of the School and the University, a good level of fundamental research will be important to sustaining the flow of new ideas that will be needed to support and sustain Irish industry in the long term.

Increased efforts should be made to ensure that excellent research outcomes result in recognition and value to the School and University, via successful top international publications, spin-off activities, or knowledge transfer to the industry.

An increased international focus, both in attracting collaboration, funding (especially EU funding) and networking (e.g. IEEE fellows) should be pursued as an important opportunity for future development. If it is carried out via the research institutes, the School should be credited and recognised.

While it is noteworthy that several members of staff were recently elected Fellows of the Irish Academy of Engineering or of the Royal Irish Academy, prominence in the IEEE should be considered as an important international network benchmark for EEE. At present, only a few of the 15 staff are members or fellows. Although some others are also very active in TPC's and review processes, encouraging and supporting those and the younger staff members towards international activity and international recognition should be continued.

Given the quality and potential of researchers in the School, ambitious objectives and systematic efforts to increase EU funding, including ERC starter, consolidator and advanced grants, should be a high priority.

Concluding statement

EEE research is focused in the institutes with relatively little being conducted within the School itself. The publication quality and peer esteem of the top 25% academic staff is excellent, but at the same time 25% of the staff members rank as only 'fair', so there is scope for improvement, and also for enhancing EU funding. PhD students are well supported.

The final overall profile and grade for EEE are as follows:

Grade	Excellent	Very good	Good	Fair	Poor
% at grade	0	45%	55%	0%	0%

Although the profile corresponds to a grade of 'good' according to the formal RQR guidelines, it comes very close to a 'very good'. The academic judgement of the Panel is that a score of 'very good' is much more representative of the overall quality level in EEE, and it has therefore allocated that grade.

The research activity of the EEE has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel G: Process and Chemical Engineering

Introduction

Process and Chemical Engineering (PCE) is a small grouping within the School of Engineering, with only five members of staff – four at Senior Lecturer and one lecturer. They work in the general field of process engineering applied to food manufacturing, as well as having some connections to pharmaceutical processing. Given the importance of both food and pharma to the Irish economy, these are sensible areas for research, and the group is working at a good level.

The size of PCE should be a significant concern to the School and the University. The 2009 RQR report recommended a total of nine academic staff, including a senior appointment, but it has not been possible to achieve this; indeed, staff numbers have decreased from six to five over the reporting period and there are no professorial level members of the group. Given the need to deliver a chemical engineering curriculum that is accredited from the IChemE, teaching loads are necessarily heavy and this limits the time for staff to do research.

RAI 1 - Selected published output

Each of the staff members submitted five papers and all were research active. Most papers were published in good international-quality food engineering or food science journals, and a number reported collaborations with EU academics or industry. Some work was published in strong general engineering journals, such as Chemical Engineering Science and energy journals. Overall the quality of the papers was good and shows that the group has international standing. There is also evidence of publications and presentations at major conferences in food and general process engineering.

The selected published output of the Department has been demonstrated to be of a good standard.

RAI 2 - Total published output

In terms of total published output, staff profiles showed a significant number of publications in all cases over the period, although only four out of five IRIS profiles were up to date. Given the constraints of the small size of the group, this publication record is commendable. There are several collaborative publications between staff members.

The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

A number of staff have been promoted to Senior Lecturer since the last RQR, showing quality. Of the five staff, four IRIS profiles were complete and reported good interactions in conferences, with some invited lectures and keynotes. One staff member won an international award (IChemE Frank Morton medal) for teaching. PCE is in the top 200 of the 2015 QS ratings for Chemical

Engineering, which is excellent given its small size. The peer esteem activity of the Department has been demonstrated to be of a very good standard.

PCE grades for RAI 1-3 are tabulated below.

Indicator	QUALITY LEVEL					
	Excellent	Very good	Good	Fair	Poor	0
RAI 1	4%	44%	52%	0%	0%	0%
RAI 2	0%	60%	40%	0%	0%	0%
RAI 3	0%	60%	40%	0%	0%	0%

RAI 4 - Research-related activity

Only three staff reported details of their research-related activities on the RA4 documentation. These three show strong external engagement and connection to external industry and academia, with one reporting particularly strong interactions. The Panel thought that the other staff members may have made good contributions, but the lack of evidence for this was disappointing. There is little engagement with University Institutes, but this may change when the proposed cross-University food grouping is established. The research-related activity of the Department has been demonstrated to be of a good standard.

RAI 5 - Postgraduate research education

All staff have supervised PhD students. PCE have graduated 12 PhDs over the last five years, and currently eight students are registered. Completion rates seem reasonable although unambiguous quantitative evidence was not available. The research students could be better integrated into the School of Engineering; it was not clear how many cross-School groupings exist. The RAI 5 notes that wireless access and a PG common room are planned in the PCE building and this should be done as quickly as possible to make the group more cohesive. The postgraduate research education activity of the Department has been demonstrated to be of a good standard.

RAI 6 - Research income

The income level reported is very low, only €474k over the five-year period, representing an average of only €19k per staff member per annum. This is well below the level necessary to sustain long-term quality in research. A major priority for the next five-year period must be to improve income, as a flow of new projects and associated income is necessary to ensure continued research activities and publications. The research income activity of the Department has been demonstrated to be of a poor standard.

Areas of good practice

The group should be commended for generating an

excellent number of international research outputs, given their size and the teaching loads.

Recommendations for future development

The PCE group is below critical mass; the recommendation of the 2009 report, that an increase in staffing is needed, is still valid and now more important than ever. A senior appointment should be made at Professorial level to help to develop a research strategy and provide academic leadership, and at least two new lecturers appointed. Given the strong connections with local food and pharma industry, and groups such as Teagasc, it might be possible to get external support for posts, and this should be investigated.

A major priority must be to attract more externally funded research projects and to increase research income; the School of Engineering has had significant funds from the EU and industry, and has good connections to research groups across the EU as shown through joint publications. The group should exploit its contacts to increase research funding and volume.

When it comes to industrial connections and collaborations, the focus of the group on food and pharma is correct given the nature of local industry; contacts with industry should be developed further to aid the volume and impact of research.

The Department website lists eight research areas which is too many for five staff; the group should develop a research strategy based on a smaller number of research areas in which they can make a difference.

The development of a coherent strategy for food-related research is particularly important for the PCE group.

RAI 5 notes that some EU/Irish programmes that provided a stream of students have ceased; the group should aim to establish suitable alternative routes such as through the EU Marie Curie programme.

Concluding statement

There is strong performance in publications from all staff, and research-related work for some of the group score well. However, the income of the group is well below that expected for a Department of comparable international standing. Increasing staff numbers and expanding research is critical for the survival and success of the PCE group.

The final overall profile and grade for PCE are as follows:

Grade	Excellent	Very good	Good	Fair	Poor
% at grade	0%	30%	55%	0%	15%

The research activity of the PCE demonstrates significance to the discipline and rigour to a good standard.

Panel G: Physics

Introduction

Physics at UCC is a small Department with 10.5 FTE academic staff plus 8.3 FTE support staff – unchanged overall since RQR 2009 (although there have been two new appointments due to retirements). Given the unprecedented period of austerity since that time this is to be commended, especially given the 18% drop in staffing university wide at UCC. It should be noted that this level of staffing remains at the very bottom end of international norms for physics, which by its nature requires a broad range of expertise. Furthermore the number of PhD students, so important for research has fallen by 50% since RQR 2009. The Department concentrates its activities into research areas: optics and photonics, condensed matter theory, laser spectroscopy, observational and theoretical astrophysics, quantum information, and plasma physics and fusion energy. Although undergraduate teaching is outside the remit of this assessment exercise, we note the very high teaching loads on staff with a staff-student ratio of 30:1, meaning that time available for research is severely limited. When the financial situation permits, the appointment of more staff must be a priority. In the meantime, the Department should continue the policy of using postgraduate, postdoctoral, and emeritus personnel as much as possible.

It is also important to note that The Tyndall National Institute, which conducts globally competitive ICT research, has a vested interest in UCC maintaining a successful Physics Department. Over half of the Physics academic staff have their research mostly or entirely based there.

RAI 1 – Selected published output

Nine Category A staff were returned, which is an excellent achievement given the constraints described above. The external referee's assessment was that their submitted publications were nearly all of high quality with essentially all papers being published in high quality, internationally recognised, journals. The selected published output of the Department has been demonstrated to be of a very good standard.

RAI 2 – Total published output

Total published output from these nine staff, as recorded in Web of Science, over the period 2008-14 amounted to approximately 280 publications. There is an average of 6.8 citations per paper, which is impressive for such, still relatively recent, work. The work submitted from the Category B staff was, as expected, of more variable quality. Nevertheless, there was evidence of additional research of merit and scholarship. The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 – Peer esteem

The peer esteem activity of the Department has been demonstrated to be of a very good standard.

Physics grades for RAI 1-3 are tabulated below.

Indicator	QUALITY LEVEL					
	Excellent	Very good	Good	Fair	Poor	0
RAI 1	16%	37%	40%	7%	1%	1%
RAI 2	13%	38%	31%	18%	0%	0%
RAI 3	26%	39%	21%	11%	3%	0%

RAI 4 – Research-related activity

In terms of peer esteem and research-related activities, the Panel was pleased to note that there had been a considerable improvement in this area since the RQR 2009 exercise. All Category A staff have become involved in international research collaborations, as recommended by the RQR 2009 Panel. There is scope for further enhancement of these activities by, for example, undertaking a leading role in an international collaborative project. Most staff act as referees for journals of international repute and serve on national and international funding agencies (e.g. the EU) and bodies related to their research (e.g. NASA, ESA). In addition, they attend and contribute to international conferences and workshops. The Panel notes that it would be helpful to staff wishing to enhance their international profile if travel money were more readily available.

Both Category A and B staff are involved in a good level of outreach activities, including departmental open days, School visits and public lectures and talks. The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

The procedures and practices in the Department for the supervision and education of PhD students compares favourably with European practice, as detailed by the European Physical Society. Supervised research remains the mainstay of all programmes in European physics. However, the Panel notes that it is generally recommended that supervisors receive more specific training and early guidance than is apparent at UCC. Within the Department, PhD coursework, which includes specialist, general and transferrable skills, is monitored, assessed and credited, following the recommendation of RQR 2009, and is now in accord with best practice. In addition, providing teaching and training experience and other non-research work (e.g. outreach), which is nowadays considered essential, is also provided by UCC Physics. A substantial fraction of the PhD students at the Tyndall National Institute are enrolled and serviced by the Department, and no problems with this arrangement were apparent in discussions with students. The average duration of a PhD in Physics (around 4.5 years) remains stubbornly long. However, the Panel notes that attempts to improve the situation as recommended by RQR 2009 have been undermined by the Irish Research Council increasing the length of their PhD grants from three to four years. The Panel considers that it would

be valuable for the evaluation and development of the PhD programme to have some monitoring and data concerning the final destinations of UCC Physics PhDs.

The Department has two taught MSc degrees (Applied Physics and Photonics), currently in abeyance, that are to be reintroduced for financial reasons in 2016. The Panel has concerns that this will impinge on departmental research activities and recommends that this be carefully managed and integrated with the taught PhD courses as much as possible.

The postgraduate research education activity of the Department has been demonstrated to be of a very good standard.

RAI 6 – Research income

Research income has remained remarkably healthy in view of national austerity during the period 2009-2014. Grants allocated to the Department typically total €1-1.5M/year which represents over €100k/staff member/year. Grants allocated to the Tyndall Institute by Physics-paid staff total ~€4-7 M/year. The main sources of support are Science Foundation Ireland, Irish Research Council, European Commission, US Air Force, and Enterprise Ireland.

The 2009 RQR Panel identified as a major issue the lack of overhead distribution to Physics from funding obtained by those with joint appointments in Physics and Tyndall. This was hindering the ability of Physics to develop and fund a research strategy. It was recommended that the Department, the Tyndall Institute and the University resolve this issue. Panel G was disappointed to find that the policy on overhead distribution had not changed, and recommends that the University explore a fair and optimised resource distribution between research institutes and academic departments.

The research income activity of the Department has been demonstrated to be of a very good standard.

Areas of good practice

Many areas of good practice adopted in the Physics Department have been detailed above under the appropriate headings and in the general Panel G Report. Basing much of Physics research at the Tyndall Institute provides access to state-of-the-art facilities for research. In the area of astronomy, participation in major international projects likewise provides a route to gaining access to world-class facilities at low cost, and fosters excellent collaborations. The staff in the Physics Department is also to be commended for their engagement with national and international professional bodies and activities.

Recommendations for future development

The future development of research in the UCC Physics Department has to be formulated to include the National research prioritisation exercise 2012 which identified 14 priority areas of focus with currently no research being funded outside these applied research areas. The EU Horizon 2020 programme is similarly oriented away from

basic research. In light of this the Panel endorses the Department's plan to introduce a research programme in the physics of biology and medicine, with a bias towards medical diagnostics and biophotonics which could link effectively with the Department's current expertise.

We strongly recommend that the University explores a fair and optimised resource distribution between research institutes and academic departments, as illustrated by the case of grants obtained by those with joint appointments in Physics and Tyndall. It is recognised that the resource distribution may need to vary with the type of grant. An improved arrangement will be of considerable benefit to Physics, and also to the Tyndall Institute in the longer term: Tyndall will benefit from a successful Physics Department via the strength-in-depth of its research staff and from a steady supply of PhD students.

Concluding statement

The Physics Department performs uniformly well on all research metrics and has the potential and motivation to achieve even greater success. The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel G: Tyndall National Institute

Introduction

In the previous 2009 review, the reviewers stated that Tyndall was "a wise and forward looking investment" and was "poised to become a premier world-class research institute", an aspiration towards which it has continued to make progress. Since 2009 it has continued to grow its size with numbers growing from about 350 staff and students at the last review to about 460 now. The research in Tyndall is broken down into four main centres: micro/nanoelectronics, microsystems, photonics, theory modelling and design, with all centres adhering to the overall theme of "Atoms to Systems". There is thus a range of activities in each centre that goes from the fundamental to the very applied end of the research spectrum.

Whilst Tyndall is predominantly research-based there is also a relatively small services activity (about 15% by staff number and 10% by research income) which supports both internal and external research programmes.

At the start of the review period, Tyndall facilities were very good and in the intervening period there has been further extremely strong progress in enhancing and extending facilities, which are now truly world class across many areas and are housed in very high quality new and refurbished buildings

The institute also has its own internal research support functions (including finance, contracts, and EU support). It has an effective senior management team, primarily drawn originally from non-academic backgrounds. Its approach is very professional, and many high quality management processes are in place.

RAI 1 - Selected published output and RAI 2 - Total published output

Overall the submission included all PI status staff from Tyndall, as well as associated staff from Chemistry, Physics, EEE, Applied Maths and from the CIT. The last review, whilst not evaluating every PI status staff member, rated the published output profile as good but not outstanding. In the evaluation in this review, with a full assessment of all PI status staff, the published output profile (both selected and total) has improved, with 62% achieving very good or excellent for selected publications and 59% achieving very good or excellent for total output. There does continue to be a tail with certain PI status staff not achieving high scores, but these are a relatively low percentage. The volume of peer reviewed research outputs has grown to approximately three per PI p.a. Whilst it is to be expected that Tyndall, given the nature of its research profile, would have a bias towards publishing in average impact factor journals such as IEEE, OSA etc., the number of publications in top ranking journals (Nature series, Science, PRL etc.) is lower than might be expected given that there is an element of fundamental research carried out within the institute.

Both the selected published output and the total published output of the Institute have been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

Not all PIs fully engaged in the process of providing up-to-date IRIS profiles and so the peer esteem results are perhaps lower than they might have been. Nevertheless, the peer esteem profile has also improved relative to the 2009 review, with 59% of assessed staff achieving scores of very good or excellent.

The peer esteem activity of the Institute has been demonstrated to be of a very good standard.

Tyndall grades for RAI 1-3 are tabulated below.

Indicator	QUALITY LEVEL					
	Excellent	Very good	Good	Fair	Poor	O
RAI 1	18%	44%	30%	6%	2%	1%
RAI 2	23%	36%	24%	14%	3%	0%
RAI 3	20%	39%	26%	14%	1%	0%

RAI 4 - Research-related activity

Several Tyndall researchers have won significant national and international prizes over the period. Engagement with industry is very strong, and there is a lot of collaborative work with national and international companies, particularly those USA domiciled. There is also significant interaction with EU organisations via FP7

projects and Tyndall is well plugged into the EU research community. It is not clear if these have resulted in many permanent collaborations or whether these usually end when the associated research project has run its course - if so, these collaborations were not highlighted in the submission.

Each centre within the Tyndall runs its own seminar programme, though it was not clear from the submission whether speakers were mainly internal or whether there was a formal external speaker programme. For an institute such as Tyndall, an external seminar/visitors programme should be in place.

Tyndall, as should be expected, has good patent protection, licensing and spin out activity relative to the rest of UCC. However, the level is low compared to similar international institutions, though it is recognised that this would require substantial institutional funding to support fully.

The institute has been very successful in continuing to develop its infrastructure and facilities (e.g. via the award of IPIC). These are now truly world class. Outreach has been very good, at least for the periods where there was an Outreach Officer in place, and the benefits of having dedicated outreach effort and expertise are clear. Tyndall has targets for its economic impact in terms of job creation etc. Whilst there clearly is impact in this regard, it is not quantified as well as it should be, and this is something to which the institute should pay more attention given its remit.

The research-related activity of the Institute has been demonstrated to be of an excellent standard.

RAI 5 - Postgraduate research education

There are approximately 120 postgraduates carrying out their research in Tyndall, about 90% of whom are doing PhDs. Many of these are registered at other UCC departments. This appears to be a relatively low number per PI (only about 1.5 per PI) against international norms, although the eligibility to supervise PhDs of all those returned as active researchers was not clear to the Panel. Amongst the relatively small sample of students interviewed, there was a high level of student satisfaction in terms of supervision, research facilities and resources. The PhD programme is moving towards a four-year structured programme - this evolution is progressing well, but is not yet complete. Completion rates were not explicitly stated but were estimated by the Head of Graduate Studies to be around 85%; if correct, this is a slightly high drop-out rate compared to other high research ranked departments around Europe. There is some variability in whether students are required to do a certain level of teaching and whether they would be paid, depending on their home Department. It seems strange to the individual students within Tyndall that they are treated differently in this respect, and this is a source of some discontent.

The postgraduate research education activity of the Institute has been demonstrated to be of a very good standard.

RAI 6 – Research income

Tyndall research income has remained steady at approximately €30M p.a. over the period. Whilst many large comparator international research organisations have seen their research funding increase over a similar period, considering the adverse funding environment in Ireland, this is a good performance. It also equates to a highly commendable figure of approximately €460k per PI p.a. – a high level when set against international norms and much higher than the average UCC number.

Given the need to raise virtually all the budget from external sources, it is important for the institute to plan for resilience. The main strategy for this is to try to increase EU and industrial funding. EU funding has remained fairly static (though at an impressively high level), though there has been a good start towards achieving the fairly aggressive Horizon 2020 funding targets. There appears to be little success with ERC grant applications, which is something that the institute should address. Industrial funding has risen but is still at a relatively low level. Various of the new funding models require industrial funding, but this is highly leveraged. The Panel notes that there is a large amount of in-kind industrial funding (via generous equipment donations) which is not counted in the numbers. Funding from SFI, Enterprise Ireland etc. has remained relatively robust given the economic circumstances and there have been some significant wins (such as IPIC).

The research income activity of the Institute has been demonstrated to be of an excellent standard.

Areas of good practice

The management of the Institute appears strong, with an effective combination of strategic planning and operational organisation and oversight. Given the requirement to fund virtually all costs out of relatively short-term grant income, it is very important that forward planning of grant applications be carried out, though the management team has this well in hand. There are good levels of student satisfaction with supervision and facilities, and it is clear that the Tyndall is an excellent place to do a postgraduate degree.

Recommendations for future development

Whilst it is not expected that an institute with the objectives of Tyndall should publish primarily in prestigious journals such as Nature, Science, PRL etc., the proportion is rather low, perhaps reflecting insufficient attention to fundamental research. Tyndall should consider whether the research mix should have a little more fundamental research than it does at present.

Whilst very strong in obtaining EU funding via FP7, with an encouraging strong start in Horizon 2020, there is little evidence of ERC applications at any level. ERC grants are often thought of as being important indicators of research esteem, as well as providing a significant additional research funding stream. Tyndall management should encourage much greater application levels.

Whilst Tyndall senior management appears to be well aware of the risks associated with the resilience of its

funding stream, it should continue to try to access as wide a range of research income as possible. Continuing to grow industrial, Horizon 2020 and ERC funding is an important part of this.

Tyndall is an outstanding facility equipped with state of the art research tools. Such tools have an effective lifetime and it may wish to consider establishing a strategic investment fund to refresh the research tools over time so the Institute can maintain its state of the art offering to its researchers.

Given the funding model for Tyndall, attracting high profile researchers and underwriting their personal funding is a challenge. Tyndall should continue to access SFI Professor, Stokes Professor and similar schemes. It is good that there is a discretionary fund to bridge the costs of PIs they recruit until they have sufficient research income to support themselves and their research groups.

Tyndall should continue to try to develop its technology transfer activities. Qualitative and quantitative metrics for economic impact should be developed so it can use these to reinforce the effectiveness of its research in this regard in order to support funding applications and to support the case for future investment.

As noted in the report on the Physics Department, there is a tension between where overhead is allocated for those PIs who have a foot in both Tyndall and in a Department, especially when the Department funds a proportion of the PI's salary. It is of mutual benefit to Tyndall and the departments to have strong departments and so UCC should consider whether a different overhead model than the currently applied 0 or 100% allocation should be agreed.

Concluding statement

Tyndall continues to support an improving profile of research output quality. There is still a (quite small) tail of researchers with low quality ratings. Management is strong and effective and generally aware of the challenges ahead. Overall, the Tyndall National Institute is an excellent centre by world standards, with high quality researchers and good research outputs, operating with world class facilities.

The final overall profile and grade for Tyndall are as follows:

Grade	Excellent	Very good	Good	Fair	Poor
% at grade	30%	70%	0%	0%	0%

The quantitative RQR scoring system results in an overall assessment of 'very good' based on this profile. However, the academic judgement of the Panel is that a score of 'very good' would not do justice to the excellence and world-class character of the Tyndall National Institute. A score of 'excellent' is therefore assigned, overriding the nominal formula. However, we stress the point noted in

Section 6.2 above, that Tyndall can and should do more to promote fundamental research and higher quality publications. The research activity of Tyndall has been demonstrated to be excellent and of leading international standard.

Panel G: Overall comments

The Panel endorses the value of the RQR exercise in enabling UCC to evaluate research performance across the University with respect to international standards, and in helping to foster a culture of research excellence within UCC. We hope that the outcome for Panel G will be used constructively by the University, the College of Science, Engineering and Food Science, and by the individual units to further improve research quality and productivity. We stress again that the raw scores provide only a crude version of a complex picture, and that we have endeavoured to convey our most important conclusions in the text of the report.

Panel G: Recommendations to the University

UCC has the commendable ambition to enhance its academic performance and reputation. One route to achieving that will be to recruit high-quality new staff, and it is to be hoped that an easing of the difficult economic situation in Ireland will permit that in the coming years. However, in any plausible scenario it will be the case that most existing staff, particularly young and mid-career academics, will be retained. It will therefore be critical for the University to enable existing staff to perform at the highest level possible.

In a rapidly evolving academic world, it is now recognised good practice to put in place a rigorous and comprehensive appraisal system to encourage and support academic staff in the pursuit of their academic activities, and to help engender a culture of high expectations and attainment. We understand that the University already has an appraisal system, but the evidence from our visit is that in its current form it is neither rigorous nor operated with any consistency or oversight. We strongly recommend that an annual appraisal scheme be put in place for all academic staff incorporating self-assessment, review by an appropriate appraiser, the setting and monitoring of clear objectives for teaching, research and external engagement, and the identification of measures needed to assist staff in achieving at the highest possible level. Such an initiative will certainly enhance research performance across the board, and bring UCC into line with best practice in comparable international institutes.

As noted in the reports on Physics and Tyndall, a review of the resource allocation practices is recommended to create a more equitable division between Schools and research institutes.

The University's policy of concentrating research in the institutes is rational and has clear benefits, but it is not a model that suits all areas – the University and College should bear in mind that high-quality research can and should occur outside the institutes, and should ensure

that it is not inhibited in strategic planning and allocation of resources.

We recommend a review of the operation of policies and guidelines relating to PhD supervision, monitoring and progression to ensure uniform interpretation and implementation across the College. Work is also needed at College level to reduce completion times, which are on the long side.

Generation of competitive Horizon 2020 funding applications requires good administrative support and expert advice to academics to ensure that proposals are well crafted and professionally produced. The University will gain ultimately by ensuring that this is well resourced.

Teaching loads in Physics and Engineering are high and are probably likely to remain so. Although teaching is beyond the scope of this review, the Panel formed the impression that there is considerable scope for a review of teaching programmes with a view to streamlining, modernising, and rationalising the multiplicity of courses and reducing teaching loads, and that this could be achieved without compromising the quality of the education or the experience offered to undergraduate and masters' students. Without some progress in this direction, academic staff will continue to be severely hampered in comparison with their counterparts in other universities in Europe and elsewhere.

To ensure that limited financial and staff time resources are utilised most effectively, that research at UCC is engaged as effectively as possible with the priorities of national and international funding agencies, and that staff at all levels are prompted to think strategically about their own situation and intentions, we recommend that the School of Engineering and the Department of Physics develop strategic plans covering a five-year timescale and encompassing future research, innovation, recruitment, international visibility, and teaching. These plans should be reviewed and consolidated in the context of an equivalent College-level plan.

UCC and its research programmes would benefit from coherent organisation of food-related research across the University. There are a number of groups across Cork that work in food research. Integration of these groups into a cross-University Institute would help the University as a whole; and, in the case of the School of Engineering, this is likely to lead to enhanced research productivity of the PCE group, and increased competitiveness for EU funding. The Panel was told that this process was underway and we suggest that it is done as quickly as possible. Such a grouping has proved useful at UCD, for example as acting as a single point of contact for discussions of EU strategy.

For future reviews, some suggested improvements to the process are (i) allow more time for visits by the Panels to the units being reviewed; (ii) put in place a larger RQR support team at UCC to assist the work of the Panels; (iii) review the quantitative scoring system, and in particular the use of a single overall grade, which represents a crude way of characterising the quality of a unit. One option could be to abandon the overall final grade and allow the quality profile to represent the merit of the unit in a more balanced way.

Panel H Report

Units in Panel H

Department of Geography
Department of Archaeology
Cork Centre for Architectural Education

Panel H members

Chair: **Professor Audrey Horning**,
Queen's University Belfast
DVC for Geography: **Professor Andrew Cooper**,
Ulster University
DVC for Archaeology: **Professor Anthony Harding**,
University of Exeter
DVC for Architecture: **Professor Anne Boddington**,
University of Brighton

Scope and context of the review

Prior to the site visit, the Panel exchanged preliminary reports based upon the evaluations of the remote reviewers for two of the units, Geography and Archaeology.

When the Panel met, we shared observations about the overall RQR process to ensure that we understood the aims and objectives of the exercise. The Chair made note of any queries arising from discussion, and followed up with the staff of the UCC Quality Promotion Unit, who were consistently helpful in their responses. We noted the differences between the format and content of the reports and statements provided by each of the three units, which made it somewhat more difficult to compare practice and achievements in a unified manner across the Panel H units of assessment. That said, one unifying theme that emerged was that very good research activity was taking place across the three units, notable particularly given the financial constraints and high staff student ratios that characterise the current landscape at UCC. Assessing the 2009-2014 levels of research activity was aided by reference to the 2009 Research Quality Review. For all three units, the 2009 RQR recommended a range of investments that, due to economic circumstances, were never implemented. As a Panel, we took the lack of investment into consideration in compiling our assessments.

The Panel split up into smaller groupings to visit the individual units and to talk to staff about research activities, infrastructure, support, and plans for the future. Following those visits, we reconvened to compare observations and discuss the manner in which the visits had helped to address Panel questions. The visit to the Cork Centre for Architectural Education (CCAEE) was particularly illuminating and useful, as summarised in the individual report below. Subsequent opportunities to meet with Deans and other members of the UCC senior management team was also very useful in fleshing out issues raised by staff members in the individual units.

The Panel worked as a group to agree to refine the criteria based on disciplinary norms for the production of scores for the individual elements of the submission. At this stage, a few individual cases were discussed where the scores of the remote reviewers for outputs and peer esteem differed from one another by more than one numerical score (e.g., 5 and 3). Panel members agreed overall scores for these outputs and individuals based upon subject expertise and consideration of the comments of the remote reviewers. In agreeing the criteria for the scores, the Panel found it challenging to assess the quality of research income because of the disparate manner in which the figures for research income were reported in the individual unit statements. It was not entirely clear how much income, for example, was actually coming to UCC when only the overall amount of a collaborative grant was reported. Similarly, it was not always clear whether UCC staff were serving as PIs or CIs on externally funded research projects.

The vagueness of the data made it more challenging to agree appropriate and fair scores for RAI 6. Another area of ambiguity noted related to information on PhD student enrolments and completions within the period of assessment for RAI 5.

Despite these concerns, we feel that our assessments are robust and factually grounded, and the below discussions and evaluations are offered up as constructive overviews with recommendations for the future.

Panel H: Geography

Introduction

The Geography Department occupies the whole of a single building on the main university campus. The assessed Geography research group comprises 18 staff in Categories A, B and C. The Department's current full-time staff complement includes 12 academic staff and one postdoctoral researcher. These staff members are currently arranged in four research clusters that cover the fields of physical and human geography. The clusters are: Society and Space; Changing Coasts, Societies and Climate; Environment, Society and Governance; and Earth Observation and Visualisation.

The staff complement has reduced by 15% since the last RQR, and the numbers of senior staff in particular have declined. The resulting high staff:student ratio (1:38) is viewed as a constraint on research-related activities. Despite this significant challenge, a highly commendable and significant volume of high quality research is being undertaken in most areas represented in the Department. The vitality of the research environment is clear and the enthusiasm across the range of staff of varying levels of seniority is also quite clear.

RAI 1 - Selected published output and RAI 2 - Total published output

Two staff (one full-time, one part-time) have no published output and one full-time lecturer has published just one article. The remaining 15 staff members each submitted five pieces of work that have been assigned various quality levels. The quality of the selected output follows a near normal distribution with most work (37%) being rated good, 25% rated very good and 19% rated fair. The fact that five staff members had uniformly high scores in their profiles, points to excellence in several areas.

The overall quality of selected outputs from this group is good and some is very good. There is a portfolio of different output types from monograph/atlas to peer-reviewed journal article. The highest quality outputs emanate from several individuals, demonstrating significant breadth in high-level achievement in the Department. A number of outputs have achieved international acclaim and have provided the Department, and the University as a whole, with very high levels of academic and public recognition. The selected published output of the Department has been demonstrated to be of a good standard.

The total volume of research outputs (160) for this group is quite high when averaged across the unit. Overall levels of productivity reach almost two articles/year on the part of the 15 members who were actively engaged in publication activity. The most abundant outputs are almost equally divided between peer-reviewed journals (33%) and book chapters (32%). This is appropriate to the subject area, especially since several book chapters were in acclaimed books edited by departmental staff. The RAI 2 total published outputs are normally distributed with 52% rated as good. The published outputs for 16% of staff were rated as 'very good' and 'excellent'. The total published output of the Department has been demonstrated to be of a good standard.

RAI 3 - Peer esteem

In terms of peer esteem, the group plays an active and appropriate role in reviewing, interacting with other researchers and delivering conference presentations. Some individuals and some outputs were accorded more attention than others in the departmental overview statement, but there is a good spread of recognition in several research fields. The scores awarded reflect an overall good level of peer esteem (42% are rated as good), and a significant proportion were considered to be very good and 26% considered to be excellent which shows the high level of esteem accorded to several members of staff.

The peer esteem activity of the Department has been demonstrated to be of a good standard.

RAI 1	QUALITY LEVEL					
	Excellent	Very good	Good	Fair	Poor	0
% of published output of unit	3	23	38	19	0	17

RAI 2	QUALITY LEVEL				
	Excellent	Very good	Good	Fair	Poor
% of researchers in unit	3	13	52	32	0

RAI 3	QUALITY LEVEL				
	Excellent	Very good	Good	Fair	Poor
% of researchers in unit	3	23	42	32	0

RAI 4 - Research-related activity

Staff are engaged in several externally funded international and national collaborative projects (Marie Curie Excellence Project (2005-09), Norface, the Irish Research Council for Humanities and Social Sciences and the Environment Protection Agency (EPA), Department of Agriculture, Forestry and Marine, Teagasc, and the EU COST Action).

Staff members have also taken the lead in editorial projects for journals and books, in organising

conferences as well as presenting at conferences, and hosting visiting speakers and researchers. The research in the Department is making important contributions to national goals and is achieving increasing international recognition. There is a very high level of engagement with the community through local groups. The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

An appropriate set of procedures appears to be in place for postgraduate student supervision, although the departmental statement does record a number of students who may no longer be engaged in research. Students have been active in pursuing additional support and several examples are listed of the types of award that have been won, including one from the Irish Research Council. The annual numbers of PhD students graduating ranges from 2 to 5.5 over the review period. This number is rather low and the difficulty of securing postgraduate funding is an issue of concern in the Department. The Department has been innovative in its efforts to tackle this, but more support would both enhance the current research productivity and provide the opportunity to maximise the training potential from departmental research.

The postgraduate research education of the Department has been demonstrated to be of a good standard.

RAI 6 – Research income

Although full details of each award are not provided, the staff secured almost €2.8 million in research income over the review period. Most seems to have come from national government departments or agencies and to have been directed at applied research. At least one is from the Irish Research Council. For a small group, this is a very commendable effort. Connection to some further EU funding via CMRC is mentioned but it is not clear if these amounts are reflected in the total for the Department.

The research income of the Department has been demonstrated to be of a very good standard.

Areas of good practice

The Department has been innovative in finding ways to support research students. The enabling technology of remote sensing is clearly a key tool in the Department. It is being used in a variety of diverse applications that harness the skills in that area.

Recommendations for future development

The loss of senior staff and high student:staff ratios with attendant high level of teaching commitment mentioned in the last RQR still pertain. Against this background, the achievements of this group are very commendable, but are probably unsustainable without additional investment. The breadth of research work across the Department, with outputs of the highest quality in several areas, point to very high potential to build upon this work and improve quality still further. This, and the

levels of peer esteem accorded to several individuals, point to a vibrant research culture among most of the staff. Maintaining this culture and building upon it is a key challenge.

The remote sensing capability in the Department is a key technology and it is being used in several collaborations in diverse fields within the Department. It is also important in income generation. As such, this element of the departmental profile should be supported and considered for future enhancement.

Although several research areas have achieved the highest levels of recognition, the existing research clusters do not seem particularly useful for, or appropriate to, current research efforts. There is a considerable degree of overlap between the clusters and some staff changes since the clusters were first constituted. It is suggested that these structures be revisited in the light of current research activity. Given the small staff complement, it may even be appropriate to think in terms of a single research group.

It would be beneficial if ways can be found to encourage non-productive staff to participate in research and publication. Similarly, reward structures for research income/productivity should be explored.

Additional strategic appointments in appropriate areas would reduce student:staff ratios and enable new staff to build upon the existing work. Physical geography is particularly poorly represented in research output.

Acknowledging the nature of the field, the near-equal volume of journal and book chapter output should be reviewed, and consideration be given to the balance between international and national journals.

This group has produced a very good range and volume of outputs, some at the highest level, and has achieved a high level of recognition within the constraints of diminished staff numbers, a high level of teaching commitment and the necessity of a broad and diverse staff skills complement. With future investment in staffing, this group has the potential to attain the highest levels of recognition and achievement.

Concluding statement

This is a small research group comprising members with different skills, delivering teaching across the necessary range of geographical themes. There is evidence for a vibrant research environment in spite of constraints imposed by very high staff:student ratios and associated teaching pressures. The research is broad in scope and excellence has been demonstrated in the quality of outputs in several areas across the full range of geographical research. High levels of peer esteem are afforded to several staff members.

Several pieces of research output have achieved international acclaim and raised the profile of the Department and the institution, demonstrating the ability of the unit to conduct high quality research. Additional investment in staff to reduce the SSR and even provision across the spectrum of Geography would maximise the potential and harness the skills and enthusiasm evident across the unit towards the development of a world-leading group. We believe as a Panel that the unit

is worthy of investment to facilitate and enhance the demonstrated potential for world leading research.

The research activity of the Department demonstrates significance to the discipline and rigour to a good standard.

Panel H: Archaeology

Introduction

The Department of Archaeology comprises eight Category A staff members and one Category B staff member. The Department’s recognised strengths represent a mixture of research and teaching activities, with emphasis on the cross-fertilisation of teaching and research, the training of students for professional careers, and engagement with the public at local and state level. Staff in the Department place particular value on situating their research before a wider public, as well as engagement with archaeology professionals in Ireland.

This report is based on the materials provided by the Department of Archaeology, UCC, to the Panel. This included access to a set of publications by the eight Category A and one Category B staff, along with peer esteem indicators (RAI 1-3), a Research Statement, and Appendices 1 (Research-related Activities, RAI 4), 2 (Postgraduate Research Education, RAI 5) and 3 (Research Income, RAI 6). These materials were augmented by the opportunity to visit the Department and meet with staff during the site visit.

RAI 1 – Selected published output and RAI 2 – Total published output

Overall, the output of the nine staff is impressive. Inevitably there is some variation between the different individuals submitted. All except one had been given at least one score of ‘excellent’ by the remote reviewers. In fact, all the staff are research-active, most of them commendably so. This is in spite of a heavy commitment to teaching and to local archaeology. The research interests of the staff of the Department are commendably broad; there is a particular focus on late prehistoric and early medieval archaeology. The staff are grouped into four research groups which (perhaps inevitably) feature some individuals more than others. In addition, three members of staff plough their own furrow in research terms. These groups are, with one exception, basically single-member interest groups; the number of staff is simply too small for real “groups” (in the sense usually found in science departments) to be possible. The exception is the early medieval and Viking research group, to which three staff members contribute, and the prehistoric transitions group, with four members.

The level of output of the staff seems commendable. We felt that more articles in international peer-reviewed journals would be advantageous.

RAI 1	QUALITY LEVEL				
	Excellent	Very good	Good	Fair	Poor
% of published output of unit	22	40	27	11	0

The selected published output of the Department has been demonstrated to be of a very good standard.

RAI 2	QUALITY LEVEL				
	Excellent	Very good	Good	Fair	Poor
% of researchers in unit	28	50	22	0	0

The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 – Peer esteem	QUALITY LEVEL				
	Excellent	Very good	Good	Fair	Poor
% of researchers in unit	22	33	28	17	0

The peer esteem activity of the Department has been demonstrated to be of a very good standard.

RAI 4 – Research-related activity

All members of staff are research-active and have a significant profile nationally and (in some cases) internationally. Although play is made of the Department’s international collaborations, these are mostly with Britain, or involve an individual playing a relatively small part in a much bigger project led by others. The statement provided by the Department notes the modules taught, the staff workloads, collaborations (some obviously much more active than others), lists of lectures given at conferences and meetings, and some presentation of “School-level research” – in which the Spike Island Archaeological Project is an important offering. Other School collaborations exist via teaching (e.g. palynology), but also between Archaeology and Geography in using the laser scanner for a number of projects. Some collaboration also occurs in terms of shared expertise in and use of remote sensing. It is recommended that these synergies and collaborations be encouraged and enhanced to the betterment of the whole School.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

The Department provided full information on the MPhil and PhD programmes, student numbers, procedures for monitoring progression and completion, and details of postgraduate training (induction, modules taught etc.). The list of theses completed is impressive, as is the ability of the Department to attract external funding for doctoral studentships. The statement of facilities on offer to students suggests that UCC provides the usual range of hardware and software – with good possibilities of using networked software for all the usual range of tasks one might expect at research student level. Performance under this research activity is excellent, with good evidence for a vibrant postdoctoral community.

The postgraduate research education of the Department has been demonstrated to be of an excellent standard.

RAI 6 – Research income

Although the level of research income is down somewhat on the previous period, the total is still impressive, at over €3.5 million (excluding consultancy). Some of these grants are small and local, while others are significant in size and potential impact. Several of the larger grants come from the Irish Research Council or Heritage Council, while quite a number of grants relate to fieldwork of various kinds within Ireland. What is currently missing is any wider European profile – the one ERC grant had to be ceded when the PI left the employ of UCC for another institution. It is strongly recommended that staff prioritise developing European funding applications.

The research income activity of the Department has been demonstrated to be of a very good standard.

Areas of good practice

The Department is to be commended for its attention to postgraduate education and development. In spite of its relatively limited resources, it has continued to attract a significant number of postgraduates at both Masters and PhD level.

The engagement with the local community through the archaeology of Cork and of Munster is also highly commendable.

Commentary on infrastructure

The Panel noted the concerns of staff members over support for labs, IT, fieldwork, and equipment, with plans for improvement and expansion mooted following the 2009 RQR curtailed by the economic situation. Some of the other recommendations of 2009 have been partially fulfilled. An ongoing challenge remains the level of funding provided for library acquisitions to support the discipline. The position of library funding for Archaeology (and maybe for some other disciplines) is inadequate. In Archaeology it is necessary to have access to a wide range of leading journals and monographs. By far from all the leading journals have digital access (even if UCC subscribes to them), and by far from all leading archaeological research is published in “leading” journals. We regard it as essential that funding for the library is enhanced. By the same token, the Department is under-resourced in terms of equipment (purchase and maintenance). The total station is nearing the end of its life, and the laser scanner in Geography (also used by Archaeology) is broken. The Departments should apply to the College fund for equipment maintenance, as this kit is essential for research and teaching activities. The geophysical equipment is of satisfactory standard but it will require maintenance and, eventually, replacement.

At present it appears that the computers in the Department are reasonably modern and we heard no complaints about the provision of software. Access to the Geography suite of software is obviously desirable



for those who do remote sensing and, as noted above, this School-level collaboration should be encouraged and supported. The dedicated IT staff support is effective and commendable. However, the staff and IT provision as currently configured may not be sufficient for access to rapidly developing areas of research and analytical techniques in archaeology; for example, haptics and automated object recording.

Recommendations for future development

1. The resourcing of the Department of Archaeology is inadequate, even for the small number of staff involved. We urge the College to commit to an increase in funding for library provision, for equipment, and for building maintenance.
2. We understand that the national economic situation has necessitated a retrenchment in university staffing (promotions and new appointments). As soon as practicable, we recommend that at least one new lecturing position is awarded, and that a member of staff who is expected to retire within a few years is replaced.
3. We regard it as essential that the Department takes steps to enhance its international profile. Although staff do sterling work in Ireland, and we would not want to see this diminished, it has to be said that the scholarly world does not think of Cork when considering high-profile archaeological work. Part of this relates to visibility on the international stage, and part to the absence of big international research projects.
4. We therefore recommend, since funding within Ireland is still uncertain and likely to remain so for some years, that applications be made to big funding bodies outside Ireland, notably the European Research Council, possibly to certain US award-giving bodies.
5. We recommend that the Department gives serious consideration to the relative importance of its teaching in relation to its research. At present it could be said that there is too much teaching, some of it to very small cohorts. This takes up a lot of staff time, which might otherwise be directed to the search for grants and, if successful, to work on major projects.

Concluding statement

The research of the Department of Archaeology is very good in terms of both quality and quantity. We see dangers to its continuance from the lack of proper resourcing and urge that this be addressed urgently. We also noted the lack of a significant international profile, which we feel is very important for the development of this unit, and should be remedied. Given the small size of the Department in staff terms, its relatively large number of research students, and its long list of fieldwork activities, is most commendable.

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel H: Cork Centre for Architectural Education

Introduction

Established in 2007, the Cork Centre for Architectural Education (CCAIE) is a joint venture between UCC and the Cork Institute of Technology (CIT). The Centre therefore has a relatively short research history built predominantly from the prior knowledge and experience of its constituent staff. The Director of the Centre is employed by UCC although the employment of the staff is divided between the two institutions. It is important to note that, with reference to research, UCC and CIT have different employment contracts. CIT staff have high teaching contact hours and no requirement to undertake research. They are, therefore, not returned in the Research Quality Review. However, their research and scholarly activity has been considered in the broader context of the review of the Centre.

The total academic staff base is small (currently five FTE) although CCAIE is well supported by a number of Category B staff. These include part-time hourly paid professional staff drawn from architectural practices across Ireland, who are not formally contracted to undertake research. Three architectural practices are specifically employed to lead the fourth and final year of the undergraduate programme and these practices have a modest research allowance per year. The professional staff bring regional and specialist knowledge as well as international links and opportunities for collaboration.

The imperative for CCAIE since the 2009 RQR has been to establish a full professionally validated course offer for Architecture comprising a four-year undergraduate and a one-year MArch programme. In addition, as identified in the 2009 Strategic Plan, an MSc by Research has been established to support the development of doctoral studies in Architecture.

The Panel noted that Universal Design had replaced Architectural Pedagogy as a research theme and that the 2009 RQR had recommended collaboration with the Department of Geography and with Planning, Art, Design and Music at CIT. This has yet to be realised formally.

RAI 1 - Selected published output

The RAI 1 quality profile comprises three members of the academic staff employed by UCC. The profile represents 12 outputs.

Both the staff at UCC and CIT are committed to developing research outputs that are responsive and relate closely to the practices of architecture and to its education, through embedding the content of research within the curriculum and the supervision of students. The outputs as presented comprise predominantly case studies drawn from research grants, observations and commentaries on architectural education and a series of innovative approaches to context and contingency articulated through architectural projects, competitions and student projects. The loss of a key scholar in the Architectural Humanities two years ago has had a considerable impact on the overarching research profile.

The resulting research profile reflects the challenges associated with articulating and locating research questions within the architectural projects and identifying the significance, originality and rigour of the research; or when applied to teaching, the relationship of the research questions to the pedagogic approach.

RAI 1	QUALITY LEVEL					
	Excellent	Very good	Good	Fair	Poor	0
% of published output of unit	3	7	33	39	0	17

The selected published output of the CCAE has been demonstrated to be of a fair standard.

RAI 2 – Total published output

The overall research profile, including staff from both UCC and CIT, demonstrates consistent activity and publication and a commitment by the staff to engage in scholarly activity and research. This includes increasing numbers of staff undertaking doctoral study. The four identified research themes: Responsive & Sustainable Architecture; Humanities and Architecture; Research by Design & Innovative Architecture and Universal Design are all represented in the broader publication profile of the Centre although as with the RAI, the significance, originality and rigour of the research within the publications is varied. There may be considerable merit in reviewing the wisdom and effectiveness of these themes and to consider instead an overarching theme such as architectural or design research, in which the various existing approaches might be positioned such that the integrated nature of the subject is more coherent and visible. Frayling's 1993/94 research framework 'into, through and for' might be a useful reference in this regard and has been effectively applied in the Art & Design sector in the UK, to assist practitioners articulate their research.

RAI 2	QUALITY LEVEL				
	Excellent	Very good	Good	Fair	Poor
% of researchers in unit	0	17	67	17	0

The total published output of the CCAE has been demonstrated to be of a good standard.

RAI 3 – Peer esteem

The broader engagement and output of the staff at CCAE is considerable and there is evidence of peer recognition regionally, nationally and internationally

and the degree to which the CCAE is building networks and showcasing its research and teaching is to be commended. There is clear evidence of impactful activity through built projects, competition entries, exhibitions, collaborative and community based projects, publications and participation in expert networks. However, it may be advisable to reflect on how these are aggregated and made more visible in the public domain through the CCAE website or alternative means. The richness and diversity of the work of the Centre is not immediately evident to potential research audiences, users or beneficiaries.

RAI 3	QUALITY LEVEL				
	Excellent	Very good	Good	Fair	Poor
% of researchers in unit	0	33	33	33	0

The peer esteem activity of the CCAE has been demonstrated to be of a good standard.

RAI 4 – Research-related activity

Given the imperative to establish undergraduate and graduate courses at CCAE, the scale and scope of research-related activities offers significant potential. To date, this has included leadership of the NEES programme funded by the European Commission's ESRF Northern Periphery Programme and support from Enterprise Ireland for the development of two major Horizon 2020 applications, including participation of five of the current Category A and B staff. The Director of CCAE has also been invited to become a founding member of the Architectural Research European Network Association (ARENA) and the Centre has been engaged in a number of Biennial Expositions (Venice and Estonia) as well as Istanbul Design Week.

The appointment of a project manager supported from research grants, to facilitate networking, liaison and the identification of research opportunities has been invaluable. The Centre has been actively participating in a growing range of activities and conferences to support future partnerships and collaborations with industry, community and academic partners internationally. Within the 2008-14 census period, these activities have already led to some success e.g. NEMBES (Network Technology in the Built Environment), and through the HEA PRTL-IV fund, that specifically attracted research and PhD funding. Future plans for exhibitions, publications and the hosting of conferences and symposia are planned between 2015 and 2020 and CCAE's networks with China, the USA and within Europe continue to grow. Prioritising which of these activities will be most effective in supporting growth in research capacity through partnership would be advisable in seeking out future opportunities (both locally and internationally). There is also a need for staff mentoring and to identify innovative exemplars and the means of embedding research and research-led teaching more visibly in the taught programmes, as enhanced visibility will, over time, lead to greater regional impact. Similarly, increased

collaboration with other departments and drawing on scholarly expertise from across both UCC and CIT would be beneficial particularly in establishing the CCAE's leadership of regional dialogue and debate and would make a considerable difference to the cultural geography and built environment of 'greater Cork' and signify the distinctiveness of CCAE.

The research-related activity of the CCAE has been demonstrated to be of a good standard.

RAI 5 - Postgraduate research education

As signalled in 2009, CCAE has established an MSc by Research, linked to the professional MArch programme, with the aim of building research capacity and a critical mass of PhD students. There is currently one student registered on this course. There has been a concerted effort to embed research within dissertation supervision, and CIT in particular have committed to enhancing the qualification profile of their staff by offering competitive doctoral scholarships. One CIT staff member has completed a PhD and two CCAE staff members have recently been successful in securing scholarships for future study from CIT.

CCAIE have a clear ambition to build doctoral links nationally, through hosting the 'All Ireland Architectural Research Group', which will be held at CCAE in 2016. The Centre is also part of ARENA and their PhD candidates have received support to attend events organised through the Architectural Humanities Research Association (AHRA). To date there have been two doctoral completions.

The postgraduate research education of the CCAE has been demonstrated to be of a fair standard.

RAI 6 - Research income

Given the small numbers of staff (three Category A), the research income and grant successes are a positive indicator and compare well in a sector where grants income is hard to achieve.

The range of funders is also a positive indicator and the appointment of a research project manager has clearly been a significant asset and enabled a small staff team to focus on undertaking research. Good professional and academic networks and the development of further applications for Horizon 2020 funding are planned. There are also clearly more potential opportunities for collaborative applications within the University and across the colleges if CCAE staff could build associations with academic clusters in Archaeology and Geography as well as seeking collaborations within the College. In addition, there may be opportunities for co-supervision with experienced researchers from across UCC that would enable academics from the CCAE to attract further income and build capacity through COST and similar network grants. This would require the CCAE to be fully integrated into the College governance and management structures such that the leadership of the Centre has access to the broader UCC and College debates alongside other Heads of School. At present the lack of access has a tendency to isolate CCAE and hinders its potential to contribute to broader more interdisciplinary research that extends beyond the traditional architectural and urban discourse. There is clearly a commitment to utilise, apply and to build research from practical application that could create opportunities to attract income and to integrate it within learning and teaching. The EU Erasmus Plus schemes may also be an effective source from which to shape research and build networks through impactful application.

The research income of the CCAE has been demonstrated to be of a good standard.

Areas of good practice

The Panel recognised the challenges of starting a new Centre and commended the following:

- Establishing an institutional research partnership with CIT in complex circumstances
- Building international research partnerships and profile
- Excellent professional engagement
- Achieving EU research income
- Achieving the Centre's first two PhD completions





Recommendations for future development

The research ratings and scores for the CCAE reflect the criteria and the research outputs of staff employed by UCC. They do not however reflect the quality of the architectural work undertaken by students or professional staff. The Panel fully recognises significant achievements of establishing CCAE in a challenging economic climate.

The RQR Panel recommended the following:

1. Leadership, Management and Governance

That UCC and CIT initiate an institutional partnership review of the governance, leadership and management of the CCAE given the recent restructuring of UCC.

The Panel identified challenges in the current partnership arrangements that militate against the development and advancement of quality research within the CCAE.

These include differences in workload planning and staff contracts concerning the differential requirement for staff to undertake research in the two institutions.

Employing significant numbers of hourly paid professional architects with no requirement to undertake research, and contracting professional architectural practices to teach student groups exacerbate the research challenge. Although these approaches arguably improve the SSRs and student experience, they create significant challenges for the fostering of a sustainable research culture, raising the quality of research outputs and attracting research income. Though not entirely incompatible, there may need to be strategic decisions made institutionally about how such tensions are effectively managed.

The governance and management structures of the College/Centre relationship raised questions for the Panel about the knowledge of and access to the UCC support provided, and the mentoring and management of research careers for all members of the CCAE staff (UCC and CIT). It was noted that, while the Director of

CCAIE is a member of UCC Council and the School of Engineering Strategic Development Committee, he is not included in higher College level management forums and did not therefore have direct access or exposure to a broader institutional discourse about research, which could, if permitted, significantly enhance both intra- and cross-college collaboration. The Panel would also recommend that research leadership and career mentoring is made available for individual staff from within UCC and CIT to ensure its sustainability.

To enhance resilience, sustainability and succession planning and develop opportunities for research and intellectual leadership, the Panel recommends that there is a decoupling of the Directorship of CCAE and its research leadership across UCC and CIT.

2. Research Content and Clusters

Given UCC's overarching commitment to research and research-led teaching, the strategic balance and vision for its delivery at CCAE was not explicit. The Panel would recommend a single research cluster is established focusing on 'paradigms of design research', with thematic strands that reflect specific staff interests and expertise (see RAI2 above).

The Panel commends the ambition and aspiration of CCAE to enhance the qualifications of staff. It would however recommend that CCAE develop a strategy beyond this aspiration as to how such an achievement will be transformative for the research culture of the Centre.

3. Research and Impact

The applied nature of the work produced at CCAE requires further articulation as to the research questions addressed. There is a need to ensure the research imperatives and methodologies are clearly communicated to others and, where appropriate, how integration within teaching and innovative pedagogic practices occurs.

It may be advisable for the CCAE team to develop a shared statement as to how research, learning and teaching are interrelated and how together they are impactful regionally and internationally. It would be advantageous for CCAE to develop its own indicators of success and articulate the evidence that would be provided to demonstrate such success.

The Panel would recommend the continued employment of the research project manager to support research funding applications and the development of regional, national and international partnerships that can enhance both research and its impact. This may require further diversification and delineation of funding applications.

4. Resources and Environment

The CCAE occupies a city centre building that has significant potential as an urban laboratory that could stimulate and host broader civic debates (beyond architecture) and stimulate more diverse collaboration. Concerns were raised by staff about the level of workshop and technical provision for making and prototyping. Given the current scale of the Centre, the most feasible option may be to reconsider the site as a maker's 'hub', so sharing resources with Cork's professional communities and with CIT.

The Panel noted that the CCAE community is active with reference to civic and research-related activities and events. However, these are not as visible and archived as effectively as they might be.

Concluding statement

We wish to reiterate our concerns about the many structural impediments to the development of an integrated research strategy across the two institutions. We believe there is considerable potential for the unit and for the discipline, and we strongly urge the university to enhance its support for Architecture through implementing our recommendations.

The research activity of the Cork Centre for Architectural Education demonstrates significance to the discipline and rigour to a good standard.

Panel H: Overall comments

The Panel recognises and commends the University for its commitment and dedication to supporting staff and disciplines while both managing severe financial challenges and aspiring to enhance and improve the university's international standing. Across all three units, and in spite of the considerable financial constraints and the inability of the institution to fully implement the recommendations from the 2009 RQR, we saw clear evidence of sustained and significant research activity. As a Panel, we commend all the staff in the three units and recognise their achievements. As stressed above, it is absolutely critical that efforts be made to further support these three units through following up on recommendations in this report and indeed, those from 2009 which have yet to be addressed.

Panel H: Recommendations to the University

- 1) Support and communication: It is clear that there are good policies and practices in place for research support, but there may not always be clear lines of communication such that all staff know what support is available and have the mechanisms for readily communicating their needs and concerns through and across the structures and management hierarchy.
- 2) Empowerment: Priority should be placed upon empowering staff to work across structures and colleges. At present, the individual disciplines and departments appear to operate independently rather than capitalising upon synergies and pooling resources as effectively as they might.
- 3) Structures: Given the above, as a Panel we would recommend an evaluation of School and departmental structures towards enhancing cooperation and ensuring maximum effectiveness. There is a diversity of approaches across the university and there may be value in considering the case for more uniformity.
- 4) Workload: The Panel commends the University for its implementation of a workload model and system, but would additionally suggest that greater attention is paid to communicating to staff expectations regarding the balance of time spent on teaching and on research. In some cases, there may be value in rationalising some teaching activity to ensure space and time for research.
- 5) Research groups: Rethink the institutional emphasis on research groups - in all units research groups simply did not have critical mass in order to operate as fully functioning clusters. Therefore, their usefulness is questionable.
- 6) Systems: Strengthen centralised systems for recording and regularising grant activity and for PhD student supervisory loads and completions in order to make such activity more transparent.
- 7) Implementation of recommendations: Our most important recommendation is that the university does follow up on outcomes and recommendations of the review. The RQR is a significant, costly and commendable institutional exercise and demanding of staff time. It is therefore an imperative that staff in all departments do experience some tangible outcome and value to the exercise.

Panel I Report

Units in Panel I

Accounting and Finance
 Business Information Systems
 Centre for Policy Studies
 Economics
 Food Business & Development
 Management & Marketing

Panel I members

Chair: **Professor Robin Wensley**, Emeritus,
 Warwick University and Open University
 DVC for Accounting and Finance:
Professor Ian Thompson,
 Herriot-Watt University, Edinburgh
 DVC for Business Information Systems:
Professor Raymond Hackney, Brunel University
 DVC for Centre for Policy Studies: **Dr Caroline Scarles**,
 University of Surrey
 DVC for Economics: **Professor Gary Dymski**,
 University of Leeds
 DVC for Food Business & Development:
Professor Bruce Traill, University of Reading
 DVC for Management & Marketing: **Dr Colin Pilbeam**,
 Cranfield University

Preface

This summary report provides the overall conclusions of the Research Quality Review for disciplinary areas associated with the newly established Cork University Business School. The Business School represents a significant strategic investment by UCC and its development and implementation activities will be informed by the outcomes of the Research Quality Review through the Business School's Quality Improvement Plan. At this nascent stage of the Business School's development, UCC considers the detailed disciplinary outcomes of the Research Quality Review to be of considerable strategic and academic sensitivity. Accordingly, this detailed information is being used internally within UCC to inform and drive on-going development work. In this context a summary of the outcomes of the Review Panel is provided.

Overall comment

The Panel recognised at the outset that any developments in research activity had to be set against severe resource and time constraints that all units had experienced during the current reporting period. The overall picture is one of significant progress but not surprisingly, not as much as anticipated in the earlier review. It is not possible to make a full comparison between the first and second evaluations given changes



to organisation structures and the wider ambit of the second review in terms of organisational units and reporting metrics. Where it is possible the same overall picture emerges with increased research activity but in most cases further to go in terms of the quality standards embodied in both reports. It is also true that to some extent resource constraint effects have been enhanced by the general system wide improvement in performance which has been documented more clearly in the recent UK REF exercise.

Recommendations to the university

As the Panel Report indicates, there are a range of good practices in the units that could be developed further and spread wider within the new School of Business.

However the Panel was also concerned to support the urgent need to now fill the six Professorial vacancies as well as the other four senior academic posts. There is a critical need for more senior academic leadership to make sure the School follows a sustainable development path in its research activity. The Panel appreciated the general logic of appointing the best candidates to senior posts but felt strongly that the recognition of certain core areas of study in a Business School curriculum, such as Marketing and Management, should mean a virtual earmarking of some of the senior-level posts to such areas of study.

It is also clear that physical facilities need some urgent attention with or without future possibilities such as a new building. Finally but certainly no less important is providing support for existing, often junior, academic staff. Study/research leave arrangements should be enhanced along with reasonable routes to personal promotion. On top of this further resources should be made available so that the current excessive staff-student ratios can be significantly reduced.

Overall comments and conclusions at Panel level

Overall there was clear evidence that progress had been made in a number of areas in improving the quality and volume of research within the units assessed.

However, the Panel noted with concern a number of areas in which resource pressures over the period had meant the pursuit of quality research had been made considerably more difficult. In particular, the lack of sabbaticals, absence of promotion, the failure in making professorial appointments, the lack of research performance incentives and the small amount of grants awarded or indeed available. The required pursuit of non-exchequer income had required a lot of effort and in many cases this had meant time away from pursuing quality research. The need for such income had also resulted in a somewhat confused understanding of what was meant by “research” and, in some cases, what appeared to be simple consultancy seemed to be included in the research category.

In a number of areas there was an obvious need for leadership and guidance to achieve higher research activity. It was also clear that the School might be appropriately seen as in transition from a “School of Business Studies” to a more mainstream “Business School”. However, to achieve this transition successfully, and the espoused commitment to achieving accreditation emphasised this, would mean making substantial progress in a number of areas. In particular AACSB accreditation emphasised *inter alia* resources, devolution, collegiality and infrastructure, as well as the importance of full access to research support at the University level.



Panel J Report

Units in Panel J

School of Applied Social Studies
 Department of Government
 School of Law
 Department of Philosophy
 Department of Sociology
 Study of Religions
 Institute for the Social Sciences in the 21st Century (ISS21)

Panel J members

Chair: **Professor Margaret Groarke**,
 Manhattan College, USA
 DVC for Applied Social Studies:
Professor Norman Ginsburg,
 London Metropolitan University
 DVC for Government: **Professor Michael Smith**,
 Loughborough University
 DVC for Law: **Professor Joanne Conaghan**,
 University of Bristol
 DVC for Philosophy: **Professor Kathleen Lennon**,
 University of Hull
 DVC for Sociology: **Professor Sandro Cattacin**,
 University of Geneva, Switzerland
 DVC for Study of Religions: **Dr Graham Harvey**,
 The Open University
 DVC for ISS21: **Dr Roisin Ryan-Flood**,
 University of Essex

Scope and context of the review

The Panel visited University College Cork for three days, from Wednesday, 17 June 2015 to Friday, 19 June 2015, meeting with the academic units being reviewed, the Heads of College and relevant senior officers of UCC.

The Panel was asked to provide a quality assessment profile, based on six assessment criteria and endeavoured to apply the criteria to the various academic units against the same standards. As was requested of us, we made allowance for early career researchers and faculty whose individual circumstances merited special consideration. We weighted the criteria as determined by the Steering Committee.

Panel J: Applied Social Studies

Introduction

Thirty-four Category A and three Category B colleagues were submitted, which is a large group. The School covers a wide range of subject areas within the social sciences, principally in social work (including child protection), youth and community work and social policy (including housing/planning, migration, health and social care), but also labour/social history and music-making (in youth work). Many of the staff have been active researchers in the School over a number of years; there is a strong sense of stability, teamwork and dynamism. The School has enthusiastically developed its research profile over the period under review. It has strong links with the Institute for Social Sciences in the 21st Century, which is reviewed separately. The School's research addresses key issues underpinning social exclusion and social injustice in modern European society, including the status of women, children, migrants, people with mental illness and dementia, and homeless households.

RAI 1 - Selected published output

The submissions were rated 7% 'excellent', 47% 'very good', 39% 'good' and 7% 'fair'. This is a very solid and consistent level of performance. The School's output has the highest citation rate in the areas of social work and social policy among the universities in Ireland. Among the outputs there are a number of monograph books, several of which are of outstanding importance. These include texts in the fields of social policy, the third sector, social work, and youth and community work, which go beyond being textbooks because of their originality and critical perspectives.

The rating reflects the considerable number of 'reports, conference publications and other publications' which are generally rated less highly than peer-reviewed journal articles and book chapters. Nevertheless, these reports were reflective, critical and appropriately user-oriented, reflecting the School's partnerships and involvements with public and third sector service providers and advocacy groups.

The selected published output of the School has been demonstrated to be of a very good standard.

RAI 2 – Total published output

The submissions were rated 3% 'excellent', 56% 'very good', 38% 'good' and 3% 'fair'. This clearly demonstrates that the School more than fulfills the University's commitment to 'research-led teaching'. Every member of this large School is consistently publishing good quality research, which inevitably enriches teaching at all levels. Most submissions included texts across the range of different types, oriented as appropriate to non-academic users, professional practitioners, undergraduate students, postgraduate students and specialist social science fields.

The total published output of the School has been demonstrated to be of a very good standard.

RAI 3 – Peer esteem

The submissions were rated 6% 'excellent', 55% 'very good', 33% 'good' and 6% 'fair'. All members of the School are substantially and actively involved in an appropriate range of activities associated with peer esteem, according to the length of their career. Most have been associated with the School for many years, and many have come through the undergraduate and postgraduate degrees at UCC. There is a particularly strong commitment to conference presentation and journal editorial work, as well as activity linked to the wider community – consultancies, outreach work etc. The School is remarkable for the stability of its membership and is internationally renowned as a centre of excellence in social work, social policy and youth and community work.

The peer esteem activity of the School has been demonstrated to be of a very good standard.

RAI 4 – Research-related activity

Conferences and Seminars: The School has hosted a steadily increasing number of events annually over the assessment period with a very wide range of topics. In 2014 there were 21 such events (compared with four in 2008), bringing in distinguished outside speakers and often organised in collaboration with other Schools/ Departments and other universities.

Examples of Policy-relevant Research: Most outputs are directly policy relevant for agencies and departments at local and national level. Examples include studies of neighbourhood regeneration for Cork City Council and for the Department of Children and Youth Affairs and the Department of Environment, Community and Local Government. Members of the School have research relationships with an outstanding range of non-governmental organisations including the World Organisation for Early Childhood Education, Health Action International, Children's Rights Alliance, Cork Simon, Cork Community Artlink.

Community Engagement: The School has played a leading role in the University's Community-Academic Research Links (CARL) initiative, which has built links between postgraduate research students and local community activities and organisations.

Media Coverage: The School's research is regularly covered by radio, television and newspapers; several

significant examples were cited, such as the 2012 publication of *Safe Care for Trafficked Children* and in 2014 *Redefining Adoption in a New Era*.

The School is very much involved in the debates about the future of child welfare in Ireland in the wake of recent and ongoing revelations of abuse and neglect. The School's research is also making a major impact in debates on human trafficking, gender equity in the workplace, pharmaceutical regulation and children's participation in urban regeneration.

This amounts to an 'excellent' contribution in which the School is making an impact not only nationally, but across Europe in addressing topics which are of vital significance across the continent and beyond, thereby enriching comparative understanding and facilitating policy transfer.

The research-related activity of the School has been demonstrated to be of an excellent standard.

RAI 5 – Post graduate research education

According to the School Statement, in 2014-15 the School has 41 doctoral research students, up from 33 in 2008-09, and 25 PhD/MPhil dissertations were submitted between 2009 and 2014. It is particularly notable that over the assessment period at least 20 students have scholarships secured by competition. These are impressive figures, though it was not possible to get precise completion rates.

The School has strengthened its processes in terms of formal research ethics approval, ensuring two supervisors for each MPhil, MSocSc and PhD by research student, and in annual monitoring and supportive peer evaluation of student progress. There is a healthy mix of full-time and part-time students. The students expressed great satisfaction with the quality of and access to supervision, and the library facilities. They are clearly benefiting from the stimulus afforded by such a big cohort, with lots of opportunities for self-mentoring and support, and for participation in seminars and conferences hosted by the School.

Doctoral research students are obliged (or encouraged as appropriate) to take a number of modules to develop their research skills, methodologies and epistemologies, data analysis and data dissemination. Through Irish Social Science Platform (ISSP) doctoral students have access to taught modules and summer schools run in a number of universities in Ireland. Thus students have access to high quality research training to meet their diverse and specialist needs.

There are four routes to a doctorate, three of which have a taught element. This is a healthy diversity and reflects the global trend away from the traditional model. The dissertation topics look to be reasonably well aligned with the clusters of expertise in the School, though perhaps not as explicitly as might be expected. The School offers an exciting environment for doctoral research students with high quality supervision and appropriate processes, meriting an 'excellent' rating.

The postgraduate research education of the School has been demonstrated to be of an excellent standard.

RAI 6 – Research income

Over the assessment period the School claims a research income of €3.8million. This is a very good figure, given that access to social science research funding is increasingly competitive and challenging, not least with the declining availability of national government funding. The School has done particularly well in participating in EU funded projects with partner institutions, principally through three major collaborative EU Framework projects. It has also been successful in getting project funding from at least twelve national and local bodies, with much effort expended in seeking out more funding from non-governmental organisations.

External funding has been and continues to be central to the development of the School's areas of research strength and clustering by enabling the development of critical mass in areas of expertise, as well as strengthening links with users and contributing to public engagement.

The research income of the School has been demonstrated to be of a very good standard.

Areas of good practice

- **Leadership and collaboration:** This is a well established team with a wide age range, a core of very experienced and committed colleagues, with encouraging and dynamic leadership. The team has actively engaged in forging research collaborations with colleagues in other Schools and other Colleges through the thriving work of ISS21.
- **Dissemination and Outreach:** Conferences, seminar, workshops and events are taking place on an impressive scale, involving students and outside users as much as possible, which is admirable and worthy of more support.
- **Focus on research topics with a European dimension:** the need to go beyond local and national users and audiences has been recognised and acted upon. The School has developed a good track record in gaining European funding and working with European partners, and, equally important, in demonstrating and arguing the relevance of the research topics to the wider social science community in Europe and globally.

Recommendations for future development

- **School Spatial Infrastructure:** The physical working environment is unhealthy, restricting and gives the impression to the outside world that the School is marginalised by the University. There are disability access issues. There is an urgent need for more dedicated space for research staff and students, and communal space too.
- **Sabbatical Research Leave:** Although six-month sabbaticals have been reintroduced, the expectation is that there be no courses cancelled or cost to the university, which in practice often leads to a doubling up of work in period either immediately preceding or following the leave. There needs to be an opportunity for 12-month sabbaticals if members of the School are to make successful big project bids, and complete peer-reviewed journal articles and monographs.
- **School-based Research Support Services:** These need

to be strengthened with the appointment of a full-time research administrator to facilitate funding bids, to coordinate existing projects, to support conference organisation, and to coordinate IT needs.

Concluding statement

The School's research activity has expanded and developed steadily and surely over the assessment period, and there is strong evidence of that continuing into 2015 and beyond. The developing Research Strategy is appropriate and sound, built around seven areas of expertise. The maintenance and further development of links between research and professional practice in social work, youth work and community work is formidable; this is an area where the School has great strength to build upon. The School's research activity clearly has a vital impact on teaching at all levels. The scale and quality of postgraduate research education, of dissemination and research-related activities is excellent. The School's research activity makes a huge contribution to the University's external profile well beyond the academic world, and deserves much greater recognition as such.

The research activity of the School has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel J: Government

Introduction

The Department of Government is relatively small (nine members of staff in Category A and two in Category B), but it is a very active Department, both in terms of teaching and associated administration and of research. The research conducted includes high levels of quality in terms of outputs; the staff have high levels of peer esteem; there is a truly excellent record in terms of staff research-related activities; and there are good or very good levels of achievement in terms of postgraduate research students and external research funding.

The Department has had to wrestle over the review period with continuing questions relating to its location within the UCC structure, and with associated issues concerning its research environment, particularly space both for staff and for research students. It has also experienced the loss of two members of staff, one of whom is now being replaced but the other of whom – a retired Chair – has not yet been replaced. In light of these continuing issues, its research achievements are highly commendable.

The Department's approach to research activities is flexible and open to a variety of approaches and methods, and the results of the research are disseminated to a wide variety of audiences, including a wide range of government organisations – there is thus a strong applied approach as well as an analytical and conceptual strength within the Department. Research planning takes place in the context of three research clusters, which provide spaces for discussion of new

initiatives and for the review of individual or group activities. The Department has links with other units within the university on a project-specific basis, and these links might well be enhanced if the structural issues noted above can be resolved in an expeditious manner.

RAI 1 - Selected published output

The picture that is presented in RAI 1 (selected staff outputs) is of a very solid overall performance in terms of published outputs, with grades overwhelmingly clustered in the good/very good range. This solid performance was demonstrated across the board, with all members of staff submitted having a number of scores in the upper ranges. The range of outputs submitted for assessment demonstrates strength in all types, with a good proportion of monographs and edited books, alongside real strength in articles published by international peer-reviewed journals and chapters in strong edited collections. It is clear that the Department has built very well on the strengths demonstrated in the previous RQR to maintain the quality of its best research outputs, but there is a need to further consolidate by improving the proportion of outputs in the highest parts of the scale.

The selected published output of the Department has been demonstrated to be of a good standard.

The detailed distribution of grades for RAI 1 is:

Excellent	Very good	Good	Fair	Poor
8%	35%	37%	18%	2%

RAI 2 - Total published output

The evidence relating to RAI 2 (overall research output) closely resembles that which emerged from RAI 1, showing a very solid overall performance. There is however a major modifying factor: it is clear that the Department has a very wide-ranging set of quality research outputs alongside those submitted for RAI 1, and that the total range of quality outputs has increased significantly – if not dramatically – since the previous review. This means that the grade for RAI 2 should be materially higher than that for RAI 1.

The detailed distribution of grades for RAI 2 is:

Excellent	Very good	Good	Fair	Poor
5%	50%	31%	14%	0%

The total published output of the Department has been demonstrated to be of very good standard.

RAI 3 - Peer esteem

The Department has a very good level of peer esteem, with inevitable variations reflecting career stages, and thus the evidence in RAI 3 (peer esteem) confirms the overall picture very strongly. The Department emerges as one with a very strong core of peer esteem, reflecting not only the quality of its publications and wider recognition of this, but also the commitment of the Department and its members to active engagement within the profession. The peer esteem activity of the Department has been demonstrated to be of a very good standard.

Excellent	Very good	Good	Fair	Poor
5%	50%	31%	14%	0%

What these grades show – and this is very significant – is a strong ability to keep up a high quality of research output in conditions that have increased the burden on the Department (through loss of staff and other resource constraints), and a continuing ability to produce across a wide range of publishing platforms. The self-assessment gives evidence of this ability, and also demonstrates that the Department has increased its productivity significantly across a wide range of types of output. It is also clear that the Department is recognised as a strong research unit within Ireland and more broadly, and that this is soundly based on the energy, commitment and professionalism of its members.

RAI 4 - Research-related activity

The claim is made in the Department’s self-assessment that it ‘has an exceptional record of public engagement’ and that staff ‘have led national political debates and contributed extensively to international political discourse’. The evidence provided, and our discussions with the Department, bear this claim out in full, and this is one of the enormous strengths of the Department’s work. Although there are inevitably variations between the activities and types of engagement demonstrated by individual members of the Department, reflecting, for example, different career stages, there is an extraordinarily high level of overall engagement, and impressive evidence of the ways in which the research conducted in the Department can be applied in a number of contexts – most obviously in the areas of what might be termed ‘applied democracy’ and Irish government, and of pedagogical research.

There are two small qualifications to this picture, which do not affect the grade but which would be worth some reflection. The first is that there is so much activity in public engagement and in other related areas that it is possible that it might crowd out the more basic research that might be conducted in the Department. This relates to another issue, which is that the Department probably needs to think more strategically about the balance between its several areas of research and research-related activity. This is especially difficult in a situation

where members of staff are running to keep up with not only their research commitments but also their other activities in teaching and administration, but it might repay itself in greater efficiency and effectiveness.

It is important also to note that this really impressive record of achievement has been achieved within the constraints of space and other infrastructural problems that have continued to challenge the Department, and in the context of high levels of teaching commitments and associated administrative loads. The fact that the Department has been able to continue with sabbatical provision (albeit at a high cost to individual members because of the need to fulfill all teaching commitments) is testament to the commitment of the Department to providing as good a research context as possible.

The research-related activity of the Department has been demonstrated to be of an excellent standard.

RAI 5 – Postgraduate research education

The Department claims a ‘vibrant postgraduate student culture’, and it is clear that postgraduate research students are included in the appropriate range of departmental activities, despite the geographical separation of PGR work spaces from the Department itself. The numbers are relatively small in absolute terms, with 16 completions of PhDs in the review period, but it must be remembered that this represents an average of nearly two per member of staff, and that a range of other research supervisions take place in the Department. There have also been peaks and troughs in completions, but that is to be expected in the circumstances. Some PhD students seem to have taken a long time to complete, and a number of long-standing students are yet to complete, but this may reflect issues of funding, employment or other factors. During the visit, the Department was able to provide more detailed evidence about the involvement of PhD students in the Department’s research clusters, and about the types of topics on which completed PhDs have been written.

It is clear that the Department has reflected on the support it can offer to PhD students, but the information provided in the self-assessment was not always as detailed as it might have been. This was true, for example of the process of research training, of the teaching commitments undertaken by PhD students and of the professional development programmes in which they might be involved. There was also no detailed information in the self-assessment on the funding available to and awarded to students, or of the support available to them for travel for conferences or fieldwork, or of publications by PhD students. As in other areas related to PGR activities, the Department was able to provide additional and helpful information during the course of the review visit, and this made it clear that, as in other areas, the Department’s resources had been strongly constrained during the review period. In this context, the achievements of PGR students both in terms of publications and of career destinations are commendable, and reflect well upon the efforts of the Department. Likewise, it was helpful during discussions with staff to see more of the Department’s thinking about the annual reviews undergone by PhD students. The use of double supervision is established and is clearly important not only in general but also in situations

where staff in a small Department take sabbatical leave to pursue their own research.

In general, the Department offers a supportive environment for research students, but clearly it also needs to take advantage of College and University resources for the support of its postgraduate researchers. The alignment of PhD students with research clusters is important, and the use of joint supervision is essential. The overall picture is of an effective system, but one with some limitations because of the size of and resources available to the Department, the location of PGR study space and the demands on its staff.

The postgraduate research education of the Department has been demonstrated to be of a good standard.

RAI 6 – Research income

The Department has been very successful in gaining research income during the review period. In all, a total of nearly €1M has been awarded to members of the Department. Once the relatively small amount of funding from internal University sources is excluded, it is clear that on average each FTE staff has gained about €90K during the period. This is a very good figure and, although there are some clear areas of concentration in terms of numbers of awards, the money has actually been spread across almost all members of the Department. Since there is no information about what the picture was in the previous review period, it is difficult to judge on a comparative basis, but it is clear that the Department has been successful in securing external funding during a very difficult period for funding in general.

The Department’s self-assessment refers to a number of ways in which the process of bidding for external funds is supported, and it seems clear that there is good practice in terms of the mentoring of research bids. It is not clear how uniform this support is, and it would have been good to see more detail on the process. This also ties in with a broader point about the discussion and evaluation of individual research plans within the Department, which seems to be relatively informal. Both the broader consideration of research plans and the mentoring of bids for external funding might be put on a more formalised basis, in order to provide colleagues with a firmer framework for development of their own research programmes. The Department provided further insight into these areas during the assessment visit, but it is still an issue that could be considered as the Department reflects on the RQR process.

It seems clear that the Department has responded very effectively to the recommendation of the previous review that it should look for small grants and for international (EU and other) collaborative grants as a means of maintaining and enhancing its external income. There are a couple of further issues that could be considered in this context: (1) Although some significant EU money has been obtained, there is not much evidence at present of involvement in the framing of collaborative projects such as those typical of Framework 7 or (now) Horizon 2020; (2) The information provided does not indicate that members of the Department have been engaged in joint bids with colleagues from across the university (for example through ISS21). The Department itself

expressed in our meetings its readiness to be involved in collaborative projects and to work to embed itself in further EU-funded projects, whilst the relationship with ISS21 could be enhanced if the Institute introduced a 'governance' theme, and if the Department was in a better institutional position to take advantage of the opportunities this would present.

The research income activity of the Department has been demonstrated to be of a very good standard.

Areas of good practice

The Department has largely achieved a very difficult balancing act – not only between its teaching, administrative and research activities, but also between the different aspects of the research domain. To this extent, maintaining the balance is an area of good practice that is difficult to pin down but has been very important for both the Department and its staff.

In addition to this, there are some specific areas of good practice that can be noted:

- The strength of the Department's commitment to applying its research, and the excellent practice to which this has given rise, which should be more broadly recognised in the University as a whole;
- The Department's commitment to an inclusive model of relations between all members of the research community, even where there are structural and infrastructural constraints;
- The Department's commitment to support for individual colleagues and PGRs in developing research projects and funding bids;
- The Department's ability to sustain a system of sabbatical leave for its members in very difficult circumstances.

Recommendations for future development

In light of the evidence reviewed in this Report, a number of recommendations for future development can be made:

- First, it is crucial that the Department returns to its initial strength, and especially that a Chair appointment is made if at all possible. This would provide leadership and the capacity to argue the case for the Department in a variety of contexts, and would assist the Department in establishing a stable base within the university.
- Second, and linked with the above, the Department should take a more strategic view of the balance between the various aspects of its research activity.

For obvious reasons, a lot of what has gone on in the past period has been reactive and incremental, and there is a need for reflection on the broader aims and structures of research in the Department.

- Third, the policy pursued since the previous review, of targeting higher quality research outlets and specifically international-refereed journals should continue and, if possible, should be reinforced so as to strengthen the output profile of the Department.
- Fourth, the Department should consider whether it would be appropriate to put its consideration of individual research plans and of bids for external funding (the two are linked) on a more formal basis, so that members are supported in the development of their individual research programmes within the departmental context. It should also consider how best to access the information and training that would enable it to become progressively more involved in bids for EU funding.
- Fifth, whilst the research clusters in the Department are doing their intended job of providing spaces for exchange of ideas and enabling staff and research students to communicate findings, it could be that they might have a role in generating new research initiatives and collaborative ventures. Some reflection on the functions of the clusters could be fruitful – for example, some thinking about the comparative merits of the clusters as opposed to a Department-based centre focused on questions of governance, which might offer more in the way of critical mass.
- Sixth, the Department should reflect upon ways in which it might further enhance the access of PGR students to financial support, and on the additional support in terms of planned professional development that could be offered to its PhD students.
- Finally, the Department should continue to pursue the question of space and its location, with a view to enhancing the meeting spaces available it and to forging a closer link between staff and PGR accommodation.

In important ways, these issues are linked, and they amount to an overall recommendation for a more strategic and confident approach to the research activity of the Department, building on its considerable achievements during the review period.

There is also here a strong recommendation for the university: that it, should as a matter of priority, settle the issue of the Department's location within the institution, in light of the preferences expressed by the Department itself and of the contribution this would make to synergies and opportunities that could be exploited for the benefit of the university as a whole.





Concluding statement

The Department of Government is a very well-established and active research unit. It has coped with a range of major demands over the past few years, and has maintained a very strong and solid core of research activity. It produces some excellent research, a lot of 'very good' research and very little that is not 'good'. It has major strengths in the area of public engagement, and has been successful in maintaining a very good level of external research income over a difficult period.

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

limited, the School ensures that resources are targeted strategically, particularly through the Centre for Justice and Human Rights (CCJHR) and the Head of School's strategic research fund.

Other than the CCJHR there are no other formal research groupings although the Child Law Clinic has proved a focal point for both research and public engagement activities. A number of researchers are also associated with Centres and Institutes in the wider University (for example ISS21 and the Environmental Research Institute). Emerging informal clusters at School level include the Constitution Project@UCC, the Law and Language Interest Group, the Law and Gender Project, and the Law, Environment and Natural Resources Group. There is also clear research strength in the areas of commercial and corporate law and in medical and family law.

Panel J: Law

Introduction

The School of Law at University College Cork has been delivering legal education since 1845. Currently home to around 700 students and 37 academic staff (including seven Professors), the School has a strong external reputation for teaching and research and a clear strategy and infrastructure to support research activities. In the last RQR carried out in 2009, the School was given a 'very good' rating. The review made a number of recommendations most of which the School has taken steps to implement. The School ethos is broadly inclusive, exhibiting a clear preference for research-led strategic initiatives which are bottom-up rather than top-down, recognise and promote diversity in research strengths, and allow research groupings to emerge organically.

The external funding context in Irish higher education has proved somewhat challenging since the last Review, placing practical constraints on the level of support for research activities both at School and university level. Nevertheless, it is clear that significant resources have been devoted to enhancing the research infrastructure, including improved library resources and PGR facilities. While support for conferences and travel is inevitably

RAI 1 - Selected published output

With regard to selected published outputs (RAI 1), 15% were assessed as 'excellent', 37% as 'very good', 38% as 'good', 6% as 'fair' and 2% as 'poor'. 2% of outputs have been assessed at 0 corresponding to outputs that are missing/not submitted. Overall, 52% of selected published outputs are 'very good' or above, while the vast majority of outputs (90%) demonstrate significance to the discipline and rigour to a good standard or better.

The selected published output of the School has been demonstrated to be of a very good standard.

RAI 2 - Total published output

Turning to the total published outputs over the assessment period (RAI 2), measured against the criteria of extent, diversity and quality of the research, 13% were assessed as 'excellent', 52% as 'very good', 27% as 'good', 6% as 'fair', and 2% as 'poor'. The proportion of work assessed at very good or above is therefore higher than in relation to RAI 1 (65%), as is the proportion of work assessed at good or above (92%). 9% of the total published work is assessed as fair (7%) or poor (2%).

The total published output of the School has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

In terms of peer esteem (RAI 3) evaluated against the criteria of international disciplinary norms, 15% of the submissions were assessed as 'excellent', 31% as 'very good', 41% as 'good', and 13% as 'fair'. These scores are slightly lower than those obtained in RAI 1 and significantly lower than RAI 2, suggesting that the quality of research being produced at UCC may not be sufficiently reflected in individual indicators of peer esteem. Given the importance of reputational factors and assessment proxies in international League Tables such as the QS, the acquisition of external indicators of esteem which reflect the real research strengths of individual staff members should be a priority for the School going forward. With 46% of the scores at very good or above, the Panel decided to award the School of Law a score of 'very good', but we urge the School to consider ways it could earn reputational scores more in line with the quality of research and education it is engaged in.

The peer esteem activity of the School has been demonstrated to be of a very good standard.

There is clear evidence of strong and sustained research performance in the School with a substantial proportion of outputs producing the highest quality standards. However, it is the view of the Panel that there is capacity in the School to produce a greater proportion of outputs at the highest quality level. To meet the criteria for excellent research work must display 'a very high level of originality, significance to the discipline, and rigour' and be 'innovative and potentially agenda-setting in research and/or policy fields'. A well-executed piece of research may not satisfy these requirements because, while excellent in its own right, it lacks a sufficiently high level of originality, significance or rigour. The School is encouraged to engage in an internal conversation about what kinds of projects are likely to attract the highest quality levels and to nurture and support intellectually ambitious projects, crafted so that they are likely to yield a high degree of originality and/or push the boundaries of the discipline/field.

RAI 4 - Research-related activity

The account of research-related activities alongside the School research strategy evidence a rich and highly active research environment which is also diverse, inclusive and attuned to the broader context for legal research in Irish HE. There is evidence of an active programme of visitorships and events, support for conference travel and other research-related activities, and strong engagement with the political and policy scene across all areas of activity. There is a welcoming openness to interdisciplinarity reflecting broader trends in legal education and scholarship, encouraged by the requirements of external funding bodies. The CCJHR provides a helpful setting for many of these kinds of activities. The Child Law Clinic also appears to provide a productive focus for both research and public engagement/knowledge dissemination activities. An additional attractive feature of the research environment is the strong integration of PhD students in the day-to-day research life of the School.

The vibrancy of the research environment is particularly commendable given the high SSR placing significant teaching demands on the School and constraints upon the School's ability to implement policies which support research activities. The Panel was pleased to hear from the Head of School that a modest reduction in teaching load for staff during the probation period is now provided and that a formal mentoring scheme to support early-career colleagues is being implemented. The Panel would continue to encourage the School to consider the adoption of wider peer mentoring schemes and to put in place mechanisms which encourage staff regularly to review their research plans and discuss these with a designated colleague or group of colleagues as part of a broader career development and research support strategy.

The Panel was pleased to hear that the School has appointed someone to provide dedicated IT support for the School and to manage the School webpages and social media outlets. Ensuring the effective dissemination and marketing of research activities is a vital plank of any strategy to enhance the external reputation of the School and internationalise its profile.

Taking account of the breadth of research-related activities, the strategic deployment of limited resources in highly effective ways and the general vibrancy of the research environment in the School, the Panel awards an 'excellent' rating for this category of assessment.

The research-related activity of the School has been demonstrated to be of an excellent standard.

RAI 5 - Postgraduate research education

The postgraduate research education provided by the School is outstanding. During the assessment period, 37 PhDs and 20 Research LLMs have been conferred, an excellent record particularly given the staffing levels. A completion rate of 95% is similarly commendable. The School is distinctive in having a strong record on LLMs by research. This is relatively rare in the UK. The level of funding attracted to support PhD study is particularly impressive as is the evidence of strong job prospects for PhD graduates. The training, monitoring and evaluation procedures adopted are excellent throughout. The School is also commended for its stunning record of PGR publications.

During the School visit, the Panel was taken on a tour of facilities including the moot room (with impressive AVA equipment) and the PGR study spaces, which were light and spacious. The presentations by the PGR students shed helpful light on the PGR experience. The students were incredibly engaged and articulate and clearly doing really great work. The Panel was particularly impressed by the degree of travel, visits to other institutions, and opportunities for students to present their work, as evidences in the student presentations.

The Panel notes with approval the adoption of a joint supervision policy at university level which the School is implementing. In general, this is an area of activity where the School appears to be doing exceptionally well.

The postgraduate research education of the School has been demonstrated to be of an excellent standard.

RAI 6 – Research income

In the UK, research income records vary widely between law schools. Moreover, high levels of research income are not necessarily regarded as an indicator of the highest quality research. It should be noted that law is a hybrid discipline, spanning the humanities and the social sciences. Some kinds of legal research, usually social sciences-based, are more likely to attract high levels of external funding than others. The shared norm within the legal academic community is that it is the quality of the research rather than whether it is likely to attract funding which is the final arbiter of research excellence. That said, many types of legal research resonate with the priorities and concerns of funding bodies and the generation of external funding has undoubtedly become a more important feature of research strategy in law schools in the UK.

Against this disciplinary context, the overall record of the School evidences a healthy environment for securing research grant income. There are a number of relatively small amounts from a range of diverse sources and some larger grants with a particularly commendable large award from Atlantic Philanthropies in 2012. Putting to one side PGR funding, the total amount of grant income during the assessment period is over one million Euro which is creditable for a law School this size and in the context of a highly unfavourable external funding environment.

The PGR income is, as noted above, very impressive – the School actually secured more in PGR funding during the assessment period than in funding to support other research activities. The spread of grants is wide and representative of virtually every area of research activities although some areas - human rights, criminal justice, child and family law – have secured more overall than others.

In terms of IRC grant success rates, the School is clearly performing well above the national average. However, the record is a little uneven from year to year. If the School does not yet have in place a system of internal peer review of grant applications, the Panel would recommend that they put one in place. The Panel consider that the strength of this element of the assessment warrants an excellent rating. The research income of the School has been demonstrated to be of an excellent standard.

Areas of good practice

The research activities at UCC School of Law evidence many areas of good practice but of particular note in the Panel's view are the following:

- 1) The provision of PGR education is outstanding in all aspects but the Panel would particularly wish to highlight the mentoring and career development of PGRs and the effective way in which the School has managed to balance strategies designed to promote timely completion with an environment in which students also seek to and successfully publish their research, supported by supervisors and other academic staff.
- 2) The Panel commends the School for continuing to maintain a healthy diversity of areas of research activity, while at the same time promoting an environment in which research clusters are emerging organically, supported by the strategic targeting of School resources, for example, the Head of School's Strategic Fund.
- 3) The Panel was particularly impressed by the effective way in which the Child Law Clinic functions as a hub for a range of important activities – research, education, and professional and public engagement – while simultaneously serving to distinguish the research profile of the School externally by evidencing clear expertise in a legal field which is still at a fairly early stage of development.

Recommendations for future development

The Panel recommends the following:

- 1) The School should engage in a concerted strategy to raise awareness and understanding among staff about what kinds of research projects are likely to reach the highest quality levels. Particular attention should be given to the conception and crafting of individual research projects which are intellectually ambitious and engage with a range of agendas including, where appropriate, those of international scholarly communities. Staff should be supported in balancing their more ambitious projects against the inevitable need to produce research and disseminate knowledge for specific, often local users, for example, the legal profession or the Government/relevant public bodies.



- 2) The School should think about developing a proactive strategy to enhance the peer esteem indicators of individual staff both at a national and international level. A necessary facet of this is greater investment in conference travel and visitor/event activities to raise the School's international profile and the visibility of School staff on the international stage.
- 3) The School should consider adopting and embedding a peer mentoring system to support research development. This can be done in a way which is consistent with the School's inclusive ethos, that is, a non-hierarchical and relatively non-prescriptive framework which is supportive not directive.
- 4) The School should consider adopting a system of internal peer review with a view to enhancing the quality and success rate of external funding applications.

Concluding statement

The School of Law is an excellent research environment and much of the work it is producing is of the highest quality standard. Within the local and national community, it achieves high impact and some of the work is also significant in the wider international legal context.

The research activity of the School of Law has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel J: Philosophy

Introduction

In the period of the review the Philosophy Department has been through a number of changes. Two senior staff were appointed in the area of comparative philosophy, which was a new direction which brought international recognition and graduate students. Meanwhile phenomenology, political and moral philosophy and philosophy of mind, body and action also rose to international prominence. But there has been leakage of staff. One loss has meant a loss of work in phenomenology and aesthetics. Then the loss of a senior member in comparative philosophy last year, and the very recent resignation of the Professor, leaves the Department without researchers in comparative philosophy and in need of a redirection of its research strategy. It urgently needs a senior appointment to enable it to do this. Meanwhile it is working with a high staff student ratio and with highly talented and esteemed staff still at lecturer level, which threatens further staff leakage.

RAI 1 - Selected published output

The overall quantity and quality of research activity of staff in the Department for the designated time period has been very impressive. From nine staff, two of whom were very early on their career, there have been seven monographs, 40 chapters in books, 40 articles in referred journals, and 12 books in edited series, in addition to encyclopedia entries, and many conference presentations.

The quality of this output under RAI 1 has been high, with 80% of the outputs submitted for assessment graded very good or excellent, leading to a strong very good grade. (45% excellent; 35% very good, 17.5% good, 2.5% fair).

In the circumstances in which staff are working, with high staff student ratios, this is an extremely impressive performance. Both the quantity and quality of the outputs was substantial.

The selected published output of the Department has been demonstrated to be of a very good standard.

RAI 2 - Total published output

In assessing the submitted and overall output for the assessment period (RAI 2), reviewers noted the diversity of ways in which research can be advanced in philosophy, from innovation in argument, to the bringing to the attention of philosophers in the west traditions of thought which can have some surprising connections with, or provide challenges to, the western tradition. We also valued, in a way that is distinct from the UK REF, the important contribution that can be made by edited collections in developing thought in specific areas, by placing in conversation a distinctive set of voices. Collections put together with insight and intelligence can play an important role in advancing the subject, and there were such collections here. The overall output in terms of quantity and quality was considered to be excellent. (55.5% excellent, 33.3% very good, 11.1% good).

The total published output of the Department has been demonstrated to be of an excellent standard.

RAI 3 - Peer esteem

The career research output of staff was excellent. In making this assessment appropriate consideration was given to early-career status and absences for parental leave. The activities of staff have given them a substantial international reputation. This has been shown by the large number of invited lectures and keynote addresses, by the translation of a number of works into other languages, and by the awards and honours awarded to staff. Of particular significance have been three book awards. There are very few book prizes for philosophy, making these awards particularly impressive. All ensure that philosophy at Cork has been put on the international map, meriting an excellent for peer esteem (RAI 3). (55.5% at excellent, 33.3% at very good, 11.1% at fair).

The peer esteem activity of the Department has been demonstrated to be of an excellent standard.

RAI 4 - Research-related activity

There have been a number of workshops and conferences held at Cork, and others, held elsewhere, in which UCC staff have played an organising role. Graduate students have played a role in helping with the organisation of these. Many of these have been organised within the context of national and international research networks with which staff are involved. The Territory and Justice network is co-directed within the Department. In addition to workshops and conferences, this has developed a significant online resource of



papers and discussions, also providing a framework for funded research projects. The network is the anchorage for the Territorial Rights and Rivers project, which has two research assistants. A member of staff co-founded the Irish Phenomenological Circle which organised, in both Cork and Dublin, highly visible international conferences (in 2011 on Merleau Ponty and Nature and in 2012 on Phenomenology, Aesthetics and the Arts) in addition to smaller workshops. These attracted speakers and participants from all over the world. This network also informed the Time and Illusion project, which was directed from within the Department with a postdoctoral researcher, and its associated workshop on Measuring Time. The involvement of staff and graduate students in the Society of Women in Philosophy, the Irish branch of which was founded in this period, has led to participation in their workshops. In 2011 the Department also hosted the conference of the Continental and Comparative Philosophy circle. The Irish Philosophical Society conference on Aspects of Freedom was held at UCC in 2014. The more recent work in History of Philosophy informed The First Irish Early-Modern Philosophy Conference, held in 2014. From 2009-13 a Theory and Philosophy summer School was held jointly with Sociology. There have also been number of visiting speakers, although after suspension, these have yet to be returned to regular schedule.

In September 2011 the Institute for Japanese studies was launched with the aim of providing a centre for research and teaching in Japanese Studies at UCC and Ireland generally. But this is an initiative which seems to have stalled and needs urgent review, given staff changes.

The events organised at UCC are open to the public, and form part of a number of activities signaling public engagement. The aesthetics conference worked with the local art gallery and held events there. In addition to this public access there have been a number of talks for/forums for local audiences (for example on drugs

policy and freedom of speech), and public interventions regarding the teaching of philosophy in schools, and involvement in the national advisory committee to implement this. Two members of the Department have served on the ethics committee of the Royal Academy.

Most of the research in the Department is done by individual researchers working individually, and clearly, in fostering diversity, very high quality research has been produced across a number of areas. There is an important forum for staff to engage with each other's work by means of Work in Progress meetings, which also involve graduate students. There are also a few joint publications. However, there does not seem to be an overall research strategy within the Department, and it seems lacking in overall research leadership and research strategy. Clearly the appointment of two senior figures in East Asian and Comparative Philosophy was successful and productive for several years in raising the profile of the Department and attracting graduate students. But with the departure of one of these figures and recent resignation of the other, clearly this direction will need to be rethought. The placing of Philosophy with Sociology with a Head of School for both does not seem to have played a significant role. There are, nonetheless, very significant groupings of research interests, within remaining staff, particularly with political and moral philosophy and philosophy of mind body and action, which could be strengthened, without rejecting diversity of interests and approaches. There is also potential for interdisciplinary work within the institution which could be further developed. It is important that systems of peer-mentoring and the sharing of research become firmly embedded. In the light of this, the Department has been awarded 'good' for research-related activities, which in other respects are excellent.

The research-related activity of the Department has been demonstrated to be of a good standard.

RAI 5 - Postgraduate research education

In 2008 there was only one PhD student on the programme. At the beginning of 2014/5 there were 25. This is a remarkable achievement. Many of these students have received funding from the Irish Research Council and others have been encouraged and supported by small Department grants.

Meetings with the students indicated a good environment for postgraduate study, with staff welcome, available, accessible and engaged with postgraduates. They welcomed the opportunities for teaching, including teaching in their own specialist areas. They welcomed the chance to take responsibility for workshops and conferences with the training in networking, budget management and organisation which this provided.

Students were positive about the range of postgraduate training modules and particularly appreciative of the departmental module which included mentoring of them through to publication of first articles or book reviews. Six book reviews and 14 journal articles had been published by students within the period.

Arrangements for supervision and review of progress seemed satisfactory. Students also felt able to approach staff easily whether or not they were official supervisors. Staff also provided advice on publications, on completion of programmes, and on job applications and cvs. Two points needed attention. Although feedback on work and arrangements for meetings with many staff were prompt, in some rare instances the students could wait for months. The Department needs to introduce maximum waiting times here. The second issue concerns supervisors leaving. Where students are far into their projects, or where there are no clear subject specialists to take over supervision, the university needs to make arrangements with departing staff to try and ensure continuation of supervision in some form.

The most important resource that postgraduates identified, in addition to individual supervisors, were forums for presentation and discussion of their work, which staff also attended, and reading groups which were also joint. They were particularly appreciative of events organised during Philosophy Week, their involvement in work-in-progress meetings and the joint

Philosophy and Sociology Summer School. There were however worries that, with pressure on staff and time, some of these initiatives seemed precarious. What is essential for the Department to protect is a forum for postgraduates to engage with staff in the discussion of their own work and the work of others.

The destinations of the departmental graduate students show the effectiveness of the programme. From 2011: nine from 14 students who completed went on to academic or research posts and four to jobs related to their research topics.

The postgraduate research education of the Department has been demonstrated to be of a very good standard.

RAI 6 - Research income

Philosophy is a disciplinary area in which it is notoriously difficult to attract research funding and yet this Department has had some notable success in this area. There have been 16 funded studentships in the period and 12 other grants amounting to around 500,000 euros. In the context in which the Department is operating this is a very good result indeed and lays the groundwork for future success. The research income of the Department has been demonstrated to be of a very good standard.

Areas of good practice

The Department has prioritised the allocation of sabbatical leave, by blocking teaching and staff providing cover for each other. They have achieved this despite adverse financial circumstances and the need, in most cases, for study leave to be arranged with no additional costs; and despite high staff student ratios. This has been crucial to both quality and quantity of output.

Staff recruitment and support of postgraduate students and involvement of them in all aspects of the Department is exemplary.

Work in Progress meetings to provide feedback on each other's work and lay seeds for possible collaborations and bids are important and should be further embedded.



Recommendations for future development

The key recommendation is that, following the retirement of the current Professor, a new Professor should be appointed. This appointee, together with staff, will need to develop an overall research strategy, while respecting the diversity of staff interests. Nascent research groupings need support and development, and forums for staff to share their work with each other given priority. In addition, high achieving staff at lecturer level need promotion to ensure retention.

Concluding statement

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel J: Sociology

Introduction

The Department of Sociology at University College Cork is part of a School combining Sociology and Philosophy, but it also works together with the Institute for Social Sciences in the 21st Century (ISS21) and the School for Applied Social Studies. The orientation and the international recognition of the Department is that of a social theory Department. The number of faculty members is that of a medium-large Department (currently 11 lecturers, 10 full-time, one half-time). Teaching in sociology is given at the BA, MA and PhD levels, but the academic staff are also engaged in other programmes, notably Criminology. Local, national and international bodies finance research activities in the Department.

RAI 1 - Selected published output

The external review of the submitted publications indicates that the academic output is important and in general of excellent quality. Of the 110 publications, 55 per cent were classified as being of international quality or very good and 39 per cent of good quality. Only 6 per cent were judged to be of fair quality. Publications are placed in leading journals and major publishers have published books by Department members.

The selected published output of the Department has been demonstrated to be of a very good standard.

RAI 2 - Total published output

The total output for the period (RAI 2) is even better, with 70 per cent of very good and outstanding quality and 30 per cent of good quality. The H-Index of the Department's senior staff (nine persons, three retired during the investigation period) confirms this overall view, with a mean of 17.

The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

Concerning peer esteem (RAI 3), the judgments underline the generally good or very good standard. A very regular and high publication output characterises all members of the Department, some books are translated, three journals are situated in the Department (the Irish Journal of Sociology, the International Political Anthropology Journal and the Irish Journal of Anthropology) and many members are regularly invited to peer-review processes (for journals, awards and project submissions at the Irish, European and international levels) and to give keynote addresses at conferences in the disciplinary field of Sociology.

The peer esteem of the Department has been demonstrated to be of a very good standard.

In its research activities, the Department of Sociology appears to be a place in which individual strategies are predominant. In general, the research is theoretically inspired and empirically informed, but not based on standardised quantitative or qualitative research methods. The assessment for publishing activities and peer esteem reveal that the Department of Sociology is acknowledged to be a centre of very good scientific production. The internationality of the Department is recognised.

From an international point of view, the Department's research is nevertheless lacking in empirically grounded quantitative research. Also, the qualitative empirical research seems to be relatively marginal; methodologically speaking, we find an orientation towards anthropology.

RAI 4 - Research-related activity

The Department's research focus is multifaceted, with a strong orientation towards social theory and, to a lesser extent, gender and health issues. Other topics in which the Department is engaged in its research-related activities are "environmental change and human behaviour", "migration/mobility studies", "family behaviour" and "socio-economics". Summer schools, (national and international) conferences and meetings are intensively organised in the field of social theory by the Department or in collaboration with other units at UCC and with other universities inside and outside Ireland.

Many links with other researchers exist, creating a dynamic that promotes interdisciplinary activities (which is typical for sociology). The Department should be proud of the significant contribution it has made to the development of ISSP, to note one important example. The website, Crimetalk, attracts a broad readership of academics, students and practitioners in the field of criminology. Yet the majority of the Department's faculty members work on individual projects with a conceptual and theoretical orientation.

Apart from these academic initiatives, we note that the public presence of the faculty members could be improved. While some members speak publicly on sociological issues and otherwise share their knowledge, the Department as a whole could expand on these worthwhile activities. Also, the way in which the Department is represented on its website is not

sufficiently attractive for a discipline that is in its nature intellectual and outside-oriented.

But this evaluation does not mean that the overall research activities are weak. On the contrary, because of the Department's networking strategies with other schools and institutes both within and beyond UCC, the overall production and reach of its research is without a doubt of very good quality.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 - Postgraduate research education

Postgraduate research and education are well developed at the Department of Sociology. The Department provides a complete array of courses in Sociology at the BA and MA levels, and its courses are central to many other programmes - in particular the MA programmes in Globalisation and Development, Criminology, Women's Studies, Contemporary Migration and Diaspora Studies and Planning and Sustainable Development - and in the PhD programmes in Social Science (GREP), Philosophy and Sociology and Women's Studies. In recent years, the Department has successfully developed courses in Criminology (led by Sociology and offered at the BA level since September 2014 and the MA level since 2010).

There are currently 24 PhD students in Sociology, and 17 others defended their dissertations in the period under investigation. The overall impression is of a relatively liberal handling of the thesis and master's projects, which is appreciated by the students. Students also have easy access to their supervisors and are very well supervised in all aspects of their work. If they need specific advice that the supervisor is not able to provide, they are helped to find competent colleagues inside, but also outside UCC.

While the Department is situated in an inappropriate place (a converted small house without adequate spaces to meet or work), PhD students have facilities (places to work) and are partially included in research and teaching activities that permit them to generate an income. The Sociology Department has an open-door policy regarding students' employment. The thesis-review process is defined by a document and supervision arrangements are signed.

Postgraduate students are also included in conference-organising activities and teaching, which provides them with a large learning platform. Students are trained to be at the cutting edge in terms of theory, but less so in terms of empirical research, where they tend to rely more on the work and help of other teachers. They already publish some work before finishing their doctoral dissertations. As a whole, the Department has a very impressive number of former students who have continued their academic careers elsewhere, which is a good indicator of the quality of the postgraduate education.

The postgraduate research education of the Department has been demonstrated to be of a very good standard.

RAI 6 - Research income

Some of the faculty members have secured funding at the Irish and European levels, usually as initiators of projects and project leaders in large projects (PRTLII, PRTLII4, ESF, IRC, EUROCORES, Paradys, FP7). More than €2.5 million have been granted to UCC through the Department's faculty members. That is an impressive sum for the social sciences, although one researcher is responsible for nearly 80 per cent of that amount, which indicates that the Department is strongly dependent on a single researcher. With the recruitment of new researchers with important experience in the acquisition of projects, this dependency will be reduced. Yet it confirms what we have already indicated in the discussion of the research activities: the Department is more theoretically orientated, which makes it difficult for several of its faculty members to obtain research income.

The research income activity of the Department has been demonstrated to be of a very good standard.

Areas of good practice

Sociology is a high-performing Department in terms of research output. Areas of good practice are its theoretical specialisation, the pedagogical engagement of the faculty members in different programmes, the leading role of the Department in promoting Sociology in Ireland and the international recognition of the members as leading scholars.

Recommendations for future development

At UCC, Sociology is not only taught in the Department of Sociology, but also in Applied Social Studies, ISS21 and the Study of Religions. Sociology is also important to many PhD and postgraduate programmes. The Department of Sociology plays a role as an incubator and a place with transversal activities. In particular, it continues to play a university-wide leadership role in establishing the major interdisciplinary social science institute, ISS21. The Department strengthens other research activities at UCC, but also other teaching programmes, in particular at the postgrad level. In other words, strengthening Sociology results in strengthening many other activities at UCC. The importance of the Department in this regard does not seem to be recognised by UCC. The working conditions are not ideal: the facilities, location and office quality are sub-par, there is a lack of regular sabbaticals, two senior staff members were not replaced and the number of students per teacher and the number of teaching hours are simply too high.

The Department's strategic position has to be stabilised by continuing to emphasise its social theory orientation, but also by improving its methodological skills, in particular in qualitative and quantitative research. Qualitative research would create particular synergies with the existing faculty if it were oriented towards social anthropology (which does not exist at UCC). Qualitative methods do not need to be overly mathematical, but they do need to be informed in areas such as network analysis and large-number research. An increasing of the faculty in this direction without penalising the theoretical orientation seems essential to guarantee the quality of work of the Department in the future.

Concerning the physical place of the Department of Sociology, we think that it would be useful to think about creating a place for the social sciences that grouped Sociology and the other social sciences – and that could also include the new orientation on Criminology as an own Department or clear subunit of the Department of Sociology. Such a physical place would certainly improve internal cooperation and probably also help to develop common research projects. The current School of Philosophy and Sociology is more an administrative unit than a real place of cooperation, and nothing indicates that it is useful to maintain it. But it can be the departure point for a larger centre that could be focused around the Department of Sociology.

Concluding statement

The Department is without a doubt a very good place for research and an excellent choice for postgrad studies. The Department is internationally recognised for its high-standing publications and loved by students for its intensive supervision and collegial atmosphere, and we strongly recommend continuing to invest in it.

The Department's strategic position inside the university, but also in Ireland, is the best indicator of its overall excellence. But this excellence can only be maintained if the Department receives the attention it deserves, in particular through an increase in the number of faculty members and better working conditions.

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel J: Study of Religions

Introduction

Study of Religions at UCC is, deservedly, highly esteemed internationally. Its small size (4 staff) makes its research performance additionally impressive. Colleagues have made good use of their position as the only Study of Religions Department in Ireland and also contribute significantly to the discipline in varied global arenas. In particular, they lead networks within Europe and Asia while significantly advancing understanding of religion(s) in Ireland. The majority of research outputs (75%) submitted for review were assessed as excellent and world-leading, and evidence strong contributions to a diverse field of study.

The unit's position in the School of Asian Studies highlights an emphasis on East and South Asian regions, religions and communities. In the review period, colleagues have also made new and nationally important contributions to understanding the religious diversity of contemporary (19th to 21st century) Ireland. This has, in turn, enriched their public engagement, dissemination activities and impact. The Department provides admirably for a growing number of postgraduate researchers, integrating them into a research culture that extends from local training seminars to international conferences and networks.

Co-mentoring among the staff enhances the Department's cohesion around discipline-shaping methodological and critical issues and encourages career development. While the unit contributes to or leads several cross-disciplinary and inter-institutional research networks (e.g. UCC's India Strategy Group, and the international Marginalised and Endangered Worldviews Study Centre) there is potential to draw researchers from other UCC schools into focused research institutes (e.g. those interested in Asian philosophies or Muslim migration). Overall, the Study of Religions at UCC meets the criteria for recognition as internationally excellent.

RAI 1 – Selected published output

Ninety-five percent of submitted outputs were evaluated as very good and excellent – evidencing and matching the Department's international leadership and excellence in research and publications.

The publications submitted for review are also impressive in scope and range, reflecting the diverse interests of Department members but also indicating significant synergies, e.g. of regional and methodological foci. They are all rooted in rigorous and original research. Some publications are agenda setting, e.g. in engaging with other-than-Christian religious phenomena and issues in Ireland or in engaging with indigeneity in India (as distinct from better known religious / cultural blocks). Those few publications that are not graded as 'very good' or 'excellent' are, nonetheless, illustrative of the ability of the authors to present important overviews of debates of wide interest. None are graded lower than 'good', indicating that they contribute to research agendas and scholarship more generally.

The selected published output of the unit has been demonstrated to be of an excellent standard.

RAI 2 – Total published output

Total outputs for the Study of Religions are important contributions to the discipline internationally. As the only Study of Religions Department in Ireland, the Department's research culture and outputs establish a strong foundation for further developments (at UCC or elsewhere), pioneering areas for further research and demonstrating best practice in research and dissemination. The submitted publications also support the Department's presentation that suggests that co-mentoring within the team leads to a cohesive and collaborative research culture. They also provide resources for the provocation of thought among both students and a wider "popular" audience, and will thereby enhance the impact of the Department beyond the university.

The total published output of the unit has been demonstrated to be of a very good standard.

RAI 3 – Peer esteem

The four colleagues reviewed here all have international reputations for excellence in research and leadership within the discipline. All of them deserve recognition indicated by 'very good' or 'excellent'. They play leading roles in national and international learned

societies devoted to the discipline and cognate areas of scholarship. The establishment of the Irish Association for the Academic Study of Religion is entirely a result of the visionary work of the Department. Indeed, it could be positioned as a spinoff from the establishment of the Department, changing the face of scholarship of religion in Ireland. Colleagues also hold offices or contribute leadership within the larger global umbrella organisation, the International Association for the History of Religions. The esteem with which they are held is further indicated by their leadership and active participation in networks devoted to the study of religion(s) in East and South Asia. It is impossible to conceive of the study of the religions currently of considerable interest to the discipline without the pioneering work of colleagues in Cork. These religions include, but are not limited to, Japanese religions, Indian indigenous religions, Orthodoxy in East and Central Europe and transnational or diasporic Islam.

The peer esteem activity of the unit has been demonstrated to be of an excellent standard.

RAI 4 – Research-related activity

One peer reviewer notes that:

The Department and its members have made impressive achievements in this field. They have created a number of different international research-related networks, they have been instrumental in disseminating religious studies knowledge to the wider public through museum exhibitions and they have managed to bring academic and public attention to previously voiceless communities.

The Panel concurs. The international links of the unit and of its individual members are impressive and near global. As importantly, they have generated significant interest within Ireland, leading the way in demonstrating the value of the Study of Religions to a wide range of debates about historical and contemporary issues. UCC has every reason to be proud and impressed by them.

Weekly research seminars which involve PhD researchers and staff in presentations and debates structure the regular research-related engagements of the Department. Research is also a standard item on the agenda of Department meetings, enhancing the co-mentoring that contributes (among other things) to developing funding bids. The Department has also organised or collaborated in running an impressive number of conferences in UCC and elsewhere, drawing in local, national and international participants from academia and beyond. All these activities provide opportunities for staff to present, debate and enhance their individual research interests. Research

student publications demonstrate the high quality of supervisory guidance offered by colleagues and are an impressive indicator of the success of the Department in contributing to the emergence of the discipline in Ireland.

The Department organises its undergraduate teaching so that all staff can take one-semester of research leave at regular intervals. By offering a “lean” teaching programme (in which modules are taught in alternate years and are offered to undergraduates in both years 2 and 3 together) the Department is able to mitigate some stresses following from the “zero-cost” sabbatical policy. When the Department becomes larger it is likely that other systems will be required to make significant periods of research leave available to staff.

The research-related activity of the unit has been demonstrated to be of an excellent standard.

RAI 5 – Postgraduate research education

Evidence of excellent support, supervision and mentoring of postgraduates is provided in the unit’s documentation. As field-leading researchers it ought to be expected that this team would guide its postgraduate researchers in best practice as emerging scholars. This does not happen always/everywhere in academia, we hear too much of senior colleagues failing new researchers. Thus, the care given to postgraduate research education by colleagues at UCC is significant. As noted, weekly seminars and integration in conferences led by staff enhance the sense that postgraduates are members of a vibrant research team and culture, rather than mere adjuncts. Publications by the Department’s postgraduates range from book reviews in international journals, to peer-reviewed articles and book chapters.

The Department has robust systems for considering applications from potential research students. Decision making is informed by staff availability and expertise as well as by the quality of proposals. Having met only one of the Department’s graduated MA students (currently waiting to hear if she has a place as a PhD researcher), as none of the PhD candidates were available, it is difficult to judge how the Department’s systems are experienced by the current cohort. Postgraduate progress is monitored at Department level in annual reviews, and is discussed in Department meetings. Oversight with the College and, perhaps, the availability of a third party monitor external to the Department may enhance these review and development systems.

The postgraduate research education of the unit has been demonstrated to be of an excellent standard.



RAI 6 – Research income

Judgements about income are made more difficult where Science models dominate. Many Arts, Humanities and Social Science colleagues conduct globally significant research with only small amounts of external income. Sometimes university standard allocations are entirely adequate. However, Study of Religions colleagues have brought in impressive amounts of income to support a range of projects from cutting-edge fieldwork and archive research to international symposia. All members of the team have contributed to income generation, some receiving more in Euro terms than others, but all gaining relatively large awards for the discipline. In the review period a total of €796,184 was raised. The average income per member of staff was €199,046 and ranged from awards of €260,000 to one of €723.

An impressive array of funders suggests a creative and dedicated pursuit of the means of conducting research and related activities. In addition to IRC, University and College funding, income has been obtained from a range of research and charitable bodies. This has enabled projects of varying sizes, including the support of postgraduate and postdoctoral researcher as well as of staff.

The research income of the unit has been demonstrated to be of an excellent standard.

Areas of good practice

The following practices are to be commended:

- A dynamic interplay between continuing to develop long-term research interests in specific religions and regions and attending to innovative collaborations (e.g. concerned with religions in Ireland and with “marginalised” religions and communities);
- A supportive, collaborative and collegial environment in which all colleagues co-mentor one another and engage well with postgraduate research students – enhancing research bids and processes as well as dialogue about critical issues.
- The building of partnerships with international research communities (e.g. in Estonia and India) as well as with researched communities signals the excellent ambition of a post-colonial and non-elitist research ethic.

Recommendations for future development

- The development of a College or University wide research cluster focused on religion(s) could bring together colleagues whose work resonates with that of the Department. This might include, e.g., colleagues researching Islamic migration or “world philosophies”.
- The Department would benefit from increased staff numbers and from the promotion of colleagues currently at lower scales than their research and other scholarly activities justify.
- The enhancement of postgraduate progress review processes with the College would enable the Department to further improve its PGR support.

Concluding statement

Study of Religions at Cork continues to be an exciting venture, watched with admiration and envy by international colleagues. The further enlargement of the Department, with a care to sustaining its ethos and collaborative processes, can only advance UCC’s reputation and the ability of the Department to make further rich contributions to the discipline in both teaching and research arenas.

The research activity of the Study of Religions has been demonstrated to be excellent and of leading international standard.

Panel J: ISS21

Introduction

The Institute for Social Science in the 21st Century (ISS21) was established in 2008 with the support of a funding award from the Programme for Research in Third Level Education Institutions, Cycle Four (PRTL14). This award has been put to excellent use with the development of this interdisciplinary unit, which draws on expertise across the University and has developed a rich and diverse research community consisting of academics and postgraduates. The Institute is producing interesting work on diverse aspects of power, inequality and difference. This report considers ISS21 in relation to the following areas: research activity; research-related activities; postgraduate research education; research incomes; areas of good practice; and recommendations for future development.

RAI 1 – Selected published output

The selected published outputs were graded by remote reviewers according to their research output. The majority of these publications fell into the ‘very good’ (35%) and ‘good’ (26%) categories, with 15% achieving a grade of ‘excellent’ and 16% allocated a ‘fair’ mark.

The range of publications is impressive, including numerous books. A future goal could be more publications in leading international peer-reviewed journals. This is already being done to a good extent, but could be a key goal in order to attract more of the international attention that the Institute deserves.

The selected published output of the unit has been demonstrated to be of a very good standard.

RAI 2 – Total published output

The reviewers commented on the quality of the research, with some comments highlighting the strength of the work within an international context. In terms of total published output, most staff members appear to be publishing regularly, although not all publish primarily in international journals. The reviewer scores for RAI 2 were similar, but slightly higher than for RAI 1. According to this measure, 44% of the total published output achieved a ‘very good’, with 24% ‘good’, and 8% ‘excellent’.

The total published output of the unit has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

This distribution is also similar to the pattern found for RAI 3, where most staff peer esteem activities fell into the 'very good' (37%) and 'good' (22%) categories, and 7% graded as 'excellent'. This is a very good outcome for a relatively new unit. However, the Institute would be strengthened by more focus on external indicators of peer esteem. This could be achieved by actively seeking such posts or affiliations that would indicate this in order to reflect the calibre of scholarship that is characteristic of the Institute. The peer esteem activity of the unit has been demonstrated to be of a good standard.

RAI 4 - Research-related activity

The ISS21 has an excellent range of research-related activities. These include various seminar series, summer schools, international partnerships, study visits, hosting visiting scholars, visiting scholars, training workshops for staff and doctoral students, and community outreach.

A number of seminar series are outlined in the Institute's report. These cover diverse fields including, for example, the seminar series' run by the Children and Young People research cluster, and the Quantitative Methods Working Group. The week long summer schools were aimed at postgraduate and early career scholars, with the intention of building research skills and facilitating networking. The Institute also hosted two European Science Foundation Exploratory Workshops during the review period.

The Institute has six research clusters and two working groups, which meet regularly, have a designated coordinator and actively develop collaborative research. It is clear that the research culture of the Institute supports interdisciplinary dialogue. This is a key strength of the Institute. Cross-disciplinary and interdisciplinary links have facilitated and strengthened the development of funding applications.

Several events hosted by the Institute have included contributions by renowned international scholars, such as the one-day international conference on Gender Equality, Citizenship and Multiculturalism in Europe, which was held in September 2010. Events of this calibre are highly beneficial to the unit in developing networks and showcasing the work of the organisation.

The Institute has also been engaged with impact and dissemination beyond the academy, through presentations and the production of research reports for user organisations. Knowledge transfer has maximised the policy impact of research carried out at the ISS21. Links have been established with major policy bodies, including the Department of Children and Youth Affairs for example. Research findings and reports are directly linked to feedback and support for user groups and policy implementation.

In addition to research activity in the form of presenting and disseminating work, conferences and developing collaborative proposals, the Institute actively supports staff in the preparation of research proposals. This is done through training and feedback on draft proposals. The mentoring of staff and support in the development of new project applications has been instrumental in obtaining

funding. The research-related activity of the unit has been demonstrated to be of an excellent standard.

RAI 5 - Postgraduate research education

The Institute lends support to the PhD in Social Sciences and several students have completed so far. The work of the doctoral students covers a fascinating range of topics incorporating diverse aspects of citizenship, identity and equality. There are 21 PhD students currently registered. The Institute also provides opportunities and an intellectual home for postgraduate students in the social science disciplines.

Many of the PhD students have secured funding for their studies, which reflects a good standard of scholarship at postgraduate level. The resources put into doctoral level education through support and training, have no doubt helped to foster a rich research culture at postgraduate level.

It is very positive that so many of the PhD students are publishing during the timeframe of their PhD studies. This will be essential in helping them to secure employment in academia in the future.

An explicit goal of the ISS21 is to develop level 4 education and it is clear that considerable resources have been put into doing this, through training, education and mentoring. The success in obtaining PhD funding and the publication outcomes of doctoral students reflect well on the Institute's efforts in this regard.

The students we met at the Institute seemed very happy and enthusiastic about their doctoral studies experience. They particularly commended the teaching dimension of the PhD programme, as well as the level of personal support they had experienced from the Institute.

The postgraduate research education of the unit has been demonstrated to be of an excellent standard.

RAI 6 - Research income

Following the initial investment provided by the PRTL14, ISS21 has gone on to achieve further funding through research grant applications. It has had considerable success in this regard, achieving over €2.7 million in additional research funding since 2008. The research projects cover a wide range of interesting and topical issues, including: transnational commuting; Irish emigration and return; housing and regeneration; young people's participation in Ireland; and the sexualisation of children.

The majority of funding has been awarded for project grants (€2,561,831) with a further €71,810 for workshops and summer schools and €80,788 for research networking and other grants. The project grants include collaborative projects across ISS21 research clusters, as well as national partners in the Irish Social Sciences platform. In addition, some funded projects involve international collaborations with partners in Europe. Funding bodies include the Irish Research Council and the European Union (ESF, H2020, FP7).

Securing research funding has been a key goal of

the Institute and integral to its sustainability. It has built on the initial funding invested in it to develop a concentrated interdisciplinary group of researchers drawn from across the University. Through supporting the development of research funding applications, it has attracted a substantial amount of funding that has allowed it to continue as a space for interdisciplinary dialogue and exchange of ideas. Research funding plays a crucial role in the development of the Institute as a key hub for social scientific research within the University. In the current timeframe following the review period, the Institute has achieved a further €4million in research funding, which is a most impressive achievement and also indicative of the sustainability of the Institute.

The research income activity of the unit has been demonstrated to be of an excellent standard.

Areas of good practice

The ISS21 provides an important space within the University for interdisciplinary research and dialogue. This maximises the potential for collaborative efforts in the form of research and funding applications and networking within the University itself.

The substantial success in attracting research funding reflects well on the Institute and its members. Their efforts have resulted in a large amount of funding for a small Institute from leading research bodies. In particular, their successful applications to European bodies represent an excellent achievement.

The research clusters appear effective as a means for facilitating collaborative research. Each cluster has been assigned a leader, which is helpful in ensuring that these groupings work effectively through regular meetings and follow ups.

The Institute has also established good links with scholars internationally, as evidenced by research collaborations and visiting fellows. These efforts promote the Institute abroad and strengthen funding bids. The Institute is instrumental in enhancing the research profile of UCC beyond the University through international collaborations.

Effective links have also been created between the Institute and various community resources and user groups. For example, the Institute has disseminated its findings to policy makers and NGOs through project reports and presentations. Relevant user bodies include the Department of Children and Youth Affairs, Cork City Council and the National Disability Authority. Work produced by the Institute has directly contributed to policy processes.

The Institute has been supportive of funding applications, through mentoring, feedback on drafts and training provision. This has been helpful in the production of high quality funding applications that resulted in a successful outcome.

A good cohort of talented PhD students has been established. The postgraduate culture provides support for training and development, as well as intellectual support.

The academic and professional services staff of the Institute have done remarkable work in submitting successful funding bids, developing the PhD programme and creating a lively and stimulating research environment. Their efforts are to be commended.

Recommendations for future development

Dedicated space and staff:

The Institute currently lacks dedicated space for its facilities. The allocation of dedicated space in the future would certainly strengthen the ISS21 in terms of its practical needs, wider standing and potential for intellectual exchange. At present, the Institute also lacks dedicated staff, both academic and professional services. Most of its staff are based in other Departments across the University. More staff affiliated solely with the Institute will also cement its importance and relevance as an interdisciplinary hub of social scientific work.

As a networked space that lacks a geographical presence and allocated staff, it is difficult for the Institute to develop a distinct identity. Growth in terms of staff and physical space will help to consolidate the work that has already been done and continue to establish the Institute as an important voice in social sciences within the University, Ireland and abroad.

Research and development:

Further publishing in high ranking, peer-reviewed international journals will raise the profile of the Institute. This is of course already happening, but any further support and encouragement that facilitates this would be beneficial.

International links:

The Institute was founded to develop and promote excellent interdisciplinary social science research. Although much of its work focuses on the Irish context, there are also international collaborations. In terms of research outputs, it will be critical to develop theoretical links with international theory, clarifying how and why the Irish context may be relevant. While a focus on Area Studies is valuable, it is important to consider wider significance within a global context. The Institute must



remain mindful of making wider theoretical connections and linking its work to international debates. Continued international networking and research collaborations will also enhance the international standing of the Institute.

Postgraduate provision:

The Institute plans to expand their graduate provision, to develop more interdisciplinary graduate research education programmes within the ISSP. This would be a positive development that would further enhance its graduate environment.

There is little discussion of research-led teaching in the information provided and this could perhaps be an area for future development. It would help to develop graduate student research clusters and enhance their knowledge base.

Online presence:

The allocation of resources to develop more of an online presence for the Institute, through the development of its website, as well as more use of social media, would further promote its work. It would also provide a useful resource for scholars and other audiences both in Ireland and internationally. This could be accomplished for example, through the incorporation of the Institute's twitter feed on its website and the uploading of vodcasts of all seminars and events to the website. The University could provide professional services staff with the appropriate training and support for this role.

Concluding statement

The Institute has made impressive achievements during the review period. It is a promising organisation that has the potential to expand and develop as a key hub of interdisciplinary Social Science theory and research. Obtaining established staff and dedicated physical space, as well as improving its online presence will strengthen its profile and enhance its place within the University.

The continued development of international intellectual links and exchange and contribution to wider theoretical debates beyond the Irish context will further strengthen its international profile.

The research activity of ISS21 has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel J: Recommendations to the University

Overall, we found the level of research at University College Cork in the social sciences to be very strong. Our quality assessment profiles follow, but the Panel would also like to share some recommendations for the UCC administration:

We reviewed the work of, and met with, many accomplished productive scholars who are still at the rank of lecturer, and even a few Senior Lecturers whose

high level of achievement would normally earn them the rank of Professor elsewhere. It is important for the motivation and retention of staff that the University maintains a regular cycle of promotional opportunities.

While the retention program, as a stop-gap measure, has prevented the loss of some faculty, it should be obvious that there are disadvantages to basing promotion on threats to leave.

Several of the departments we met with are located in Victorian-era houses that have not been well-maintained – hence they are damp and often deficient in some basic facilities. These houses could be congenial homes for these departments if the necessary renovations and improvements were made, and the University should invest in that.

Many of the departments we visited do not have sufficient space for their activities, nor is their space contiguous. We echo the recommendation of the RQR 2009 report that there should be a designated space for the social sciences. Such a space would foster even greater interdisciplinary cooperation. We understand that the university is working on a comprehensive space plan to create more space and to consolidate units and colleges. We think this is very important, and urge the university planners to make both long and short term plans to move toward meeting these goals.

We were initially glad to hear that sabbaticals have been restored as the nation comes out of the financial crisis, but we are concerned that what a sabbatical often means at UCC is that faculty teach a double load in one semester to be able to take the second semester off. While several of the departments we reviewed have been creative in figuring out how to make sabbaticals possible, University College Cork, as an institution that prizes research, must do more to make real sabbaticals a reality.

We were impressed with the research and public engagement work we heard about during this review process, and believe that it merits wider dissemination. We would encourage the university to properly support units in building their public profile on the internet and elsewhere. The University overall should have a more proactive communications strategy – using media outreach, the website, and social media to promote the good things that are happening at UCC both in terms of education and research. The communications office must be nimble and flexible enough to respond quickly to opportunities to broadcast events and good news from UCC to the world. UCC should also encourage individual departments to also consider how they want to be seen and known.

The university leaders we met emphasised that professional services to assist with grant seeking, public relations, and IT are available to all, a policy of which we strongly approve. We encourage them to remember that one size does not fit all and to develop tailored strategies for smaller, non-STEM units, to maximise the already encouraging efforts in the social sciences.

Panel K Report

Units in Panel K

School of Applied Psychology
School of Education

Panel K members

Chair: **Professor Jackie Marsh**,
University of Sheffield
DVC for Applied Psychology:
Professor Angela Clow, University of Westminster
DVC for Education: **Professor Pat Thomson**,
University of Nottingham

Scope and context of the review

The review was conducted during a period of challenge for higher education in Ireland. Despite overall signs of economic recovery, this is not yet extended to higher education generally. In this context, the University is to be commended for undertaking a research review exercise in order to develop its strategy in the years ahead.

The Panel members developed a detailed document to inform its review, relating the UCC RQR criteria and defining key terms (e.g. extent, diversity and quality) in the light of disciplinary norms. In assessing RAI 1-6, the Panel used the criteria developed by UCC, 'Research Quality Review 2008-2014 Guidelines'. The criteria were sent to all reviewers.

Remote reviewers' grading of outputs, total published output and peer esteem were reviewed, and moderated where necessary by DVCs. The Chair of the Panel ensured consistency in approach across the units of assessment. Panel members met with representatives of the Schools and held meetings with students. The School of Applied Psychology also provided a tour of their premises.

Panel K: Applied Psychology

Introduction

The Panel recognised substantial contextual pressures during the assessment period. Increased student numbers alongside loss of key senior staff resulted in soaring staff student ratios and a severe threat to the research environment. In addition, it was a period of instability in terms of leadership with three different Heads of School and three School Managers in the period. Despite these challenges, the School has adopted several of the recommendations from the last research review. In particular, it has now clearly identified and promoted its areas of research strength and supports a large, thriving and productive postgraduate research community (PGR). In these difficult times the School has prioritised expansion of PGR numbers alongside development of some excellent research laboratories, especially in the areas of driving simulation and psychophysiology. The challenge is to maximise usage of these facilities given the limited technical support available within the School. The School is beginning to move out of the difficult assessment period with successful recruitment of four new early career academics that are not included in this assessment exercise. More staff are needed to provide the critical mass that will ensure sustainability of the School in terms of teaching (course accreditation) and research excellence. The Panel is confident that, if supported, the School has a bright future enabled by the supportive and resolute approach of its academics.

RAI 1 - Selected published output

Excellent	Very good	Good	Fair	Poor
10%	45%	20%	20%	5%

There was a broad spread of research quality with the majority of staff submitting outputs with very good and excellent ratings. Publications included seminal books and peer-reviewed publications in high-impact factor

journals. Many outputs were the product of national and international collaboration, which has been actively encouraged by the School's research strategy. Areas of particular strength include the human computer interaction, childhood studies, psychophysiology, health psychology and aging. The selected published output of the School has been demonstrated to be of a very good standard.

RAI 2 - Total published output

Excellent	Very good	Good	Fair	Poor
6%	18%	29%	29%	18%

Assessment of the total published output for the period for each of the named staff was judged to be good in terms of extent, diversity and quality. Perhaps it is not surprising, given the time constraints over the assessment period, that this rating falls below that of RAI 1 in terms of the volume of outputs per staff. The total published output of the School has been demonstrated to be of a good standard.

RAI 3 - Peer esteem

Excellent	Very good	Good	Fair	Poor
0%	25%	45%	20%	10%

Peer esteem indicators were ascertained from the Professional Activities section of the relevant staff profiles on the web page. There was little indication of awards, prizes, keynotes, editorial duty and strategic advisory roles. This disappointing state may reflect the staffing profile (one Professor, two Senior Lecturers and 17 lecturers) and the limited availability of resources for staff to attend conferences in the period. The peer esteem activity of the School has been demonstrated to be of a good standard.

RAI 4 - Research-related activity

A high proportion of staff members have participated in production of a diverse range of quality research outputs. The School has a well-organised series of activities aimed at disseminating research, especially for the PGR community. There is evidence of high quality research-led teaching across all levels. This includes student access to excellent laboratory-based research facilities. There is growing intra-institutional research collaboration and existing national and international collaboration. There was clear evidence of prioritisation of early career researchers in allocation of teaching load and informal mentoring as well as availability of a sabbatical system available to all staff. The research-related activity of the School has been demonstrated to be of a very good standard.

RAI 5 - Postgraduate research education

Postgraduate research education scored the highest of this evaluation. The School has doubled its PGR numbers since the last exercise and is rightly proud of its vibrant community of Research Students. The students benefit from new facilities located in the heart of the School. Many are funded and are proactive at disseminating at national and international conferences - winning many awards and prizes. The School operates the recommended transparent processes for rigorous supervision and monitoring. Completion rates are excellent. The postgraduate research education of the School has been demonstrated to be of an excellent standard.

RAI 6 - Research income

Research income of 1,333,000 euros over the period is good but substantially reduced relative to the last research review.

The research income of the School has been demonstrated to be of a good standard.

Areas of good practice

1. Despite the challenging times, the Panel noted the breath of staff engagement with the research process and the generation of quality research outputs across the majority of staff.
2. Prioritisation of resources for the development of laboratory spaces and equipment make the School well-placed to move forward to the next period.
3. There has been growth in PhD numbers and there is excellent PGR training and completion. There is a vibrant community of PGR students that is clearly active at national and international level. The Panel noted that the School had adopted recommendations in the area from the last research assessment.
4. Support for Early Career Researchers was notable, with reduced teaching load and informal mentoring.
5. The sabbatical scheme is open to all staff.
6. There is clear evidence of a strong, supportive research culture.
7. The development and delivery of research-led teaching is a strength.

Recommendations for future development

1. The staff-student ratio should continue to be monitored.
2. Recruitment of new staff is required to build research capacity in areas of strength within the School.
3. Opportunities for technical support should be maximised. This is needed to sustain maximum usage of the hard-won research facilities. Where needed, staff development and training of existing technical support staff should be delivered.
4. Strategy and policies to support grant applications should be reviewed. This should include the adoption of obligatory pre-submission peer-review and selection procedures to manage research bids to reduce internal completion and wasted time from failed bids.
5. The pursuit of a strategy of collaboration both across the University and internationally should be continued.

6. Whilst the quality of the PGR environment is commendable, the School may consider the balance of priorities in terms of research support.
7. School post-doctoral positions to support PG and enhance staff research should be considered.
8. It is notable that academic staff were not regular attenders at relevant international conferences and this may impact on their opportunities to develop peer-esteem.
9. A formal mentoring system with clear role specifications should be introduced. These would include peer-review of outputs prior to submission.
10. Better use should be made of the web pages to clearly represent the ambitions and achievement of research in the School.
11. In future research quality exercises the School should present a more positive and comprehensive overview of activities. E.g. inadequate information on research income and peer esteem was supplied, although it is recognised that there were difficulties in central systems which affected the timely collection of data.

Concluding statement

It has been a tough few years and the Panel felt that the School had been particularly adversely affected by the economic climate. However, the School has a strong sense of identity and a robust and supportive culture that provide optimism for future growth and development. Scores for individual elements ranged from 'good' to 'excellent', reflecting the relative strengths and weakness in the School.

The Panel felt that the strongest area of the School's work was the quality of its postgraduate training. Whilst there were strengths in the range of quality of publications it was noted that the level of grant capture over the review period was reduced relative to the last assessment period. The Panel felt that a more sustainable staffing strategy would enable the School to increase research income as well as improve the quality and quantity of total published output and peer esteem. The Panel felt there was potential for expanding further the national and international position of the School if investment could be made in appointing staff with strong research profiles. The School could further improve in all areas and build on current levels of performance.

The research activity of the School has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

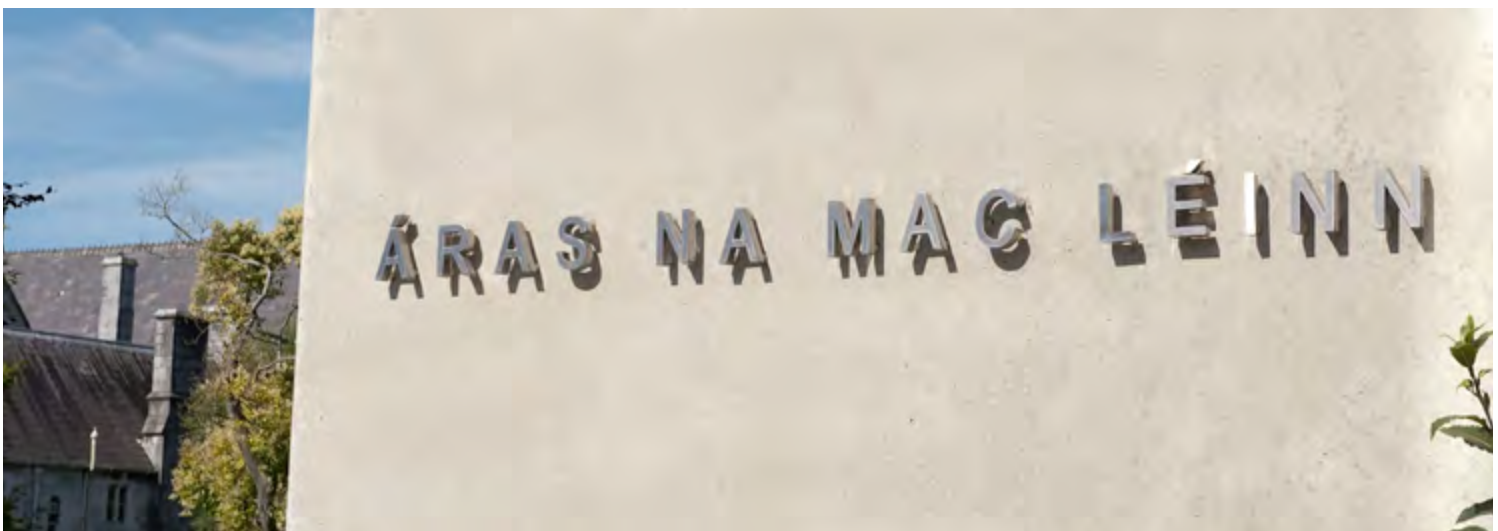
Panel K: Education

Introduction

The Panel recognised the significant progress made by the School since the last Research Quality Review. The key recommendations have been acted upon and there is evidence of enhancements across all areas. Strong leadership in the School has enabled it to meet the challenges of extending work in a climate of reduced resources. In addition to the general economic challenges faced by the University, the School of Education has also had to deal with major changes to the way in which initial teacher education and continuing professional development for teachers is organised and delivered.

A fundamental restructuring of the undergraduate ITE programme and the introduction of a two-year masters' programme, with new and stringent requirements from the Teaching Council, led to a heavy demand on staff time. In addition, the School's postgraduate programmes accounted for some 37% of the post graduate applications across the CACSSS, with resultant demands on workload. The School has also developed a highly innovative and robust cohort PhD programme and maintained an impressive masters and doctoral completion rate. It is also clear to the Panel that the School has acted on the key recommendations of the previous Research Quality Review to substantially increase the number of peer-reviewed publications. At the same time, during the review period, the School lost a senior member of staff. The Panel noted the high staff-student ratio comparative to the University standards and disciplinary norms.

This is a small School with a sizeable teacher education programme. It is notable that the majority of staff have doctorates, which is not always the case within the discipline. The work of the School of Education staff was presented in relation to the three research themes in the School:



- Pedagogies, Learning and the Politics of Curriculum
- Teacher Education and Professional Learning
- Schooling, Inclusion and Changing Childhoods

RAI 1 - Selected published output

Excellent	Very good	Good	Fair	Poor
20%	35%	15%	10%	20%

The quality of research has improved since the previous review. The submission demonstrated engagement with a range of areas within the field of education, drawing on theoretical frameworks and methodological approaches from a range of disciplines including psychology, sociology, history and philosophy. Some of the work reviewed demonstrated a very high level of originality, significance and rigour, being innovative in nature and contributing strongly to theory and policy. There was, however, a small body of work which lacked ambition in terms of scope and which could be characterised as too localised in nature. The selected published output of the School has been demonstrated to be of a very good standard.

RAI 2 - Total published output

Excellent	Very good	Good	Fair	Poor
15%	40%	15%	10%	20%

Since the previous review, the School has focused strongly on ensuring that staff concentrate on publications in peer-reviewed outlets, including high quality journals. Measures of extent, diversity and quality in this area were judged to be very good. Again, as in RAI 1, there was an uneven spread in the submission, typical of the discipline given the primary focus some staff need to have on teacher education. There was clear evidence of impact on research agendas in relation to socio-cultural and sociological studies of education and teacher education, and on policy in areas such as teacher education, sports sciences, assessment, science, English, literacy and mathematics. The selection of outputs is varied, as appropriate for the field of Education, but there is obviously still more work to do in ensuring that all staff seek more extensive publication in peer-review journals. The total published output of the School has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

Excellent	Very good	Good	Fair	Poor
20%	40%	15%	15%	10%

There was evidence of a range of markers of esteem within the field, such as significant professional service, advisory roles to governments and professional bodies and conference organisation. Whilst there is evidence of engagement in journal editorial roles, this was not as extensive as would be expected for a School of this size. The peer esteem activity of the School unit has been demonstrated to be of very good standard.





RAI 4 – Research-related activity

There is a strong and diverse set of activities in which the School engage, both internally and externally. The School organises many seminars and conferences, including the major OMEP conference, which is commendable as it offers a rich environment not just for staff but also for students. Some staff are engaged in international collaborations that involve prestigious projects. Three staff were supported to win a prestigious national scholarship, which demonstrates disproportionate national success for the School. Sabbaticals are supported where possible. The area for the next phase of development is in relation to early career researchers; although it was possible to discern strong mentorship, there seemed to be no adherence to university guidelines such as reducing teaching load. We realise that this is an issue to be addressed externally to the School. Despite this, the School offers a vibrant research environment for staff and students and there were elements of provision in this area that met the excellent grade. The research-related activity of the School has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

The School currently has 45 PhD students enrolled, and has graduated 33 during the census period. The level of completion is extremely high. The cohort PhD provides a collegial support group, a structured training programme and distributed supervision. It provides a much stronger framework for support for part-time students than is normal in university provision. It is also possible for students to undertake an independent PhD route. We note that this provision requires a considerable out-of-hours commitment by School staff.

The provision outlined in RAI4 offers a strong and vibrant research community for students. Students are also supported in attending and presenting at external conferences. Just over half of the staff are involved in PhD supervision, a number which could be extended. As yet, the School does not have a policy on support for student publication. The annual literacy research conference, which showcases masters research, is an exemplary way to support students to learn about



impact and engagement. The Panel noted the active engagement of masters' students in the research community, which is commendable.

The postgraduate research education of the School has been demonstrated to be of an excellent standard.

RAI 6 – Research income

Researchers in the School have consistently raised a creditable quantum funding, given the constraints faced by the field in this area. At the start of the review period, a comparatively small number of staff were working as PIs; however, there were a larger and more diverse group of PIs in 2014. There is a very small number of staff successful in attracting larger grants, with a larger number of staff securing comparatively small sums.

There has been a concerted effort to increase collaborative research within and across the School. Some of the larger research projects appear to have had significant influence on policy and practice. Whilst there has been some success in attracting EU funding, this is an area for development. There is also further potential for partnering with UK institutions to compete for UK funding. There also seems to be emerging scope for interdisciplinary research through the Institute for Social Science in the 21st Century (ISS21). The research income of the School has been demonstrated to be of a very good standard.

Areas of good practice

1. The School demonstrates a clear commitment to a social justice approach to its work and there is a strong sense of a collegiate and collective approach to the work – the School strategy was developed in an inclusive manner.
2. The research culture is vibrant and provides both staff and students with opportunities to engage in a wide range of activities both internally externally.
3. Each of the three research themes has a distinct profile, whilst facilitating cross-centre work. This provides a coherent structure for School research activities.

4. The quality of research-led teaching is impressive and it is clear that their teaching impacts upon its students' own School policy and practices and develops them as reflective practitioners.
5. Given the university's interest in research with impact, the School of Education offers a fine example of ongoing strong engagement with professional practice and policy. The focus on staying close to practice in order to influence professional knowledge and behaviours is important. Combining this with research in relevant areas leads to clear indicators of impact. However, it may not lead to the most prestigious publications in all cases and this is a challenge.
6. The cohort PhD with its associated seminar and lecture programme is a model which is influencing the university as well as providing an effective focal point for School research activities.

Recommendations for future development

1. While the quantity of peer-reviewed publications has increased, the challenge now is to increase the number of staff engaged in publishing work that meets the highest of standards in terms of originality, significance and rigour. The Panel recommends that all staff are supported to develop long-term (5 year) personal research and publication plans, which includes an increased emphasis on publication in peer-reviewed journals.
2. The School has some involvement in interdisciplinary work within UCC and across universities within Ireland and Europe. This is a potential area for expansion to support research funding. For example, the School has been involved with ISS2I in relation to childhood studies, but could meaningfully become engaged in other streams run by that centre. In addition, opportunities to participate in UK research council funding with UK partners could be more actively pursued.
3. It would be of benefit to the School to benchmark its systems, processes and outcomes in relation to other Schools of Education internationally. This may provide information, for example about alternative ways to utilise sabbaticals and visiting professorships.
4. The School should strengthen the support offered for early-career researchers, in liaison with the Faculty and University over its needs.
5. In the next Research Quality Review, it is recommended that there is more oversight at School level on the outputs submitted by staff and guidance on the summary staff provide alongside the outputs.

Concluding statement

In sum, given the challenges in the national context for higher education, the changes in teacher education and the high staff-student ratio in the School, the Panel commends the School for the significant improvements they have made since the previous review.

The Panel felt that the strongest areas of the School's work were its impact on the profession and its engagement in national educational policy. The quality of its postgraduate training is also excellent. Whilst there were notable strengths in the range of quality of publications and the sustained level of grant capture over the review period, the Panel felt that a more sustainable

staffing strategy would enable the School to improve further. There is strong potential for expanding further the national and international position of the School, given the good practice noted in this review. In the next review period, if investment could be made in appointing staff with strong research profiles, then the School could further improve in all areas and build on the excellent progress that has been made in the current review period.

The research activity of the School has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel K: Overall comments

Both Schools reviewed in this Panel had faced significant challenges in the review period, including high staff-student ratios and staff turnover. The national economic context presented additional problems with regard to the deployment of an effective promotions strategy. Despite these challenges, staff in the Schools have continued to demonstrate a high level of commitment to their roles. The Panel felt that both Schools deserve significant investment from the University in the next review period. Both Schools have external professional bodies (the Teaching Council and the Psychological Society of Ireland) that have deemed the current staffing level to be too low for needs. In addition, investing in the Schools in this way can have wider benefits not only for the disciplinary research undertaken within them, but also for the University's external profile in terms of its impact on and investment in local, regional and national domains.

The benefits the University accrues from the knowledge exchange activities and professional profile of these two Schools, for example the strong links developed with local schools and regional health authorities, or the national impact on teacher education policy, can inform future strategic work on impact and engagement.

Panel L Report

Units in Panel L

Modern Irish
Early and Medieval Irish
Béaloideas / Folklore and Ethnology

Panel L Members

Chair: **Dr Regina Uí Chollatáin**,
University College Dublin
DVC for Modern Irish:
Professor Micheál Ó Mainnín,
Queen's University Belfast
DVC for Early and Medieval Irish:
Dr Jacqueline Borsje,
University of Amsterdam
DVC for Béaloideas:
Dr Lillis Ó Laoire,
National University of Ireland, Galway

Scope and context of the review

The Panel understands that this is the second review of this nature that has been carried out in University College Cork. The formal review process began with meetings of the Steering Committee and Panel Chairs which the Chair of Panel L attended on 3 November 2014. The context, purpose and objectives of the Research Quality Review were outlined and discussed at this meeting. While it was understood that one of the key objectives was to provide a picture of the quality of research at UCC, the approach was to be developmental with recommendations from the Panels. Research impact was considered to be of significance but in the context of this review and the diversity of disciplines it is important that this is considered in relation to what is appropriate to the relevant discipline. In accordance with decisions taken at the first briefing session for Panel Chairs, the Panel Chair and the Disciplinary Vice-Chairs for Panel L agreed to provide some further operational guidelines on reviewing according to disciplinary norms.

Through a collaborative process which involved submissions of published work and summaries of research activity including postgraduate research, and research income, the Chair, Discipline Vice-Chairs and Remote Reviewers provided ratings based on the

Research Activity Indicators 1-6 presenting an overall evaluation of research activity in Modern Irish, Early and Medieval Irish, and Béaloideas / Folklore & Ethnology. During a three-day site visit to UCC from June 30 to July 2, 2015, Panel L members met with members of the UCC RQR Steering Committee, the Interim Head of the UCC College of Arts, Celtic Studies and Social Sciences, the College Research Officer, and senior officers including the Bursar, Librarian, Director of Buildings and Estates, and Director of Research Support Services. This provided a forum for clarification of matters arising from the review. Panel L also met with Heads of Departments, staff members and students in all three units. This provided the Panel with an overview of the context and physical working environment. Moreover, it presented an opportunity to discuss the Research Quality Review in light of the development and requirements of each unit to maximise its potential. The site visit was central to the process in the insights it provided to the work being done.

A draft report was put together over the period of this site visit. Published outputs which had been submitted by individual units were considered by the Panel as a whole before and during the site visit in the context of the assessment provided also by Remote Reviewers. It should be emphasised that the Panel worked as one unit at all times assessing the Research Activity Indicators in the context of the research quality and not in the context of individual researchers.

The Panel summarised its initial findings for the unit representatives in an exit presentation on the final day of the site visit (2 July 2015), and an initial draft of this report was put together and discussed. This final report is the result of the findings which were put together at that point alongside further deliberation and reflection subsequent to the visit. The Panel wishes to thank all parties involved for their contribution to this Research Quality Review process and for their input in providing the overall picture of the research context within each individual unit.

Panel L: Modern Irish

Introduction

The unit currently has six permanent academic staff; this is a reduction of one since the last research review and of three since 2005-2006 when there were nine academic staff (as noted in the report of the previous Research Review Panel). The Panel accepts that the further reduction in overall staff complement is a consequence of the extremely harsh economic environment which has brought about a significant reduction of state funding of the university sector since 2009. In that context, the Panel commends the unit's success in continuing research activity at a high level despite the additional pressures of higher staff-student ratios and reduced budgets.

RAI 1 - Selected published output

Three of the 45 selected publications were assessed by only one of the two Remote Reviewers (for a variety of reasons); in these circumstances, it was deemed fairest to exclude these three outputs from the Panel's evaluation (RAI 1). Of the total of 42 outputs which were admissible, it was noted that the great majority were deemed to be of a very good standard in terms of originality, significance and rigour. Furthermore, outputs of excellent quality, displaying a very high level of originality, significance and rigour, were manifest across the range of outputs and pointed to pockets of excellence within the submission. It was very important to acknowledge that none of the 42 outputs were adjudged to be 'poor' or 'fair' and that only a minority of the total (7%) were considered by both reviewers to be 'good' (i.e. of good quality in terms of significance and rigour). This indicated a very strong performance on the part of the unit in terms of selected outputs.

The selected published output of the Department has been demonstrated to be of a very good standard.

RAI 2 - Total published output

The totality of the research outputs in the period is commendable bearing in mind the pressures noted in the Introduction and the heavy burden on staff (RAI 2). All members of staff are clearly research-active and some have benefitted from periods of employment in research institutes which served as a launching pad for a steady stream of publications which has helped to bolster the total outputs. The Department does not have any sabbatical leave rota or mechanism by which members of staff can be afforded time to complete outputs or advance major research projects in the short to medium term. During the site visit, discussions with staff indicated that this is linked to staffing pressures and student numbers.

The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

There is evidence for considerable peer-esteem (RAI 3), relative to 'age and stage' (and bearing in mind, also, that

one of the current staff is an early career researcher). Staff have national and international standing within the field, as evidenced in invitations to give papers at conferences and to publish in prestigious outlets. They have made significant contributions to learned societies and editorial boards, in terms of peer-review and editing, and have contributed in important ways to the health of the discipline, both nationally and internationally. The peer esteem activity of the Department has been demonstrated to be of a very good standard.

RAI 4 - Research-related activity

The Department is active in what may be described as two key domains of the discipline: linguistics, and textual and literary studies. It has identified its core projects and these play to its strengths and the special interests of its staff (notably in manuscript studies, textual editing and commentary, and areas of linguistics). Some new directions have been identified which have great potential (e.g. pan-Gaelic studies) and which take UCC into new domains which will impact significantly on the health of the discipline. In some instances, there is evidence of interdisciplinarity (notably the 'Legal Deeds Project' which receives input from colleagues in History) and of inter-institutional collaboration, including support for 'Irish Script on Screen', one of the most important initiatives in recent years to be undertaken by the premier research institute in the field, the Dublin Institute for Advanced Studies. The unit is also to be commended for its ongoing collaboration with the Department of Early and Medieval Irish in sustaining the Irish Texts Society Seminar Series on an annual basis; this has been one of the top conferences in the field over many years and has placed UCC on the map internationally as a very significant player in the discipline. The Department is showing an increasing awareness of impact beyond the academy and of the benefits of public engagement; a highlight in terms of its recent activity has been the introduction of the 'Irish Poetry in Context' series which opens up discussion of contemporary Irish poetry by bringing together practitioners and members of the public.

Recent developments under the new Chair in research-led teaching at undergraduate level should also be noted; this exploits primary resources which are available in UCC and elsewhere (e.g. manuscripts in the Boole Library) and, in so doing, advances one of the longer-term strategic research interests of the Department in terms of manuscript cataloguing. This is an example of excellent practice.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 - Postgraduate research education

This has been noted as a departmental priority in the Department's Research Statement and it is clear that it is very conscious of the centrality of postgraduate training to the future of the discipline. Postgraduate numbers are small but, in the current economic climate, compare favourably with other institutions. Funding of postgraduate study, particularly at doctoral level, is an issue but the Panel notes the unit's success in obtaining an Irish Research Council award and in attracting students from elsewhere (see also below). Students expressed

satisfaction with the quality of supervision on offer but there are major concerns in terms of funding available for participation in academic conferences and for student-led initiatives. At institutional level, some consideration of review processes would be helpful in seeking to support progression within the timeframe allowed and to clarify the mechanisms for dissemination of this to all units.

The postgraduate research education of the Department has been demonstrated to be of a very good standard.

RAI 6 – Research income

Research income is strongest in the postgraduate domain; success in the Irish Research Council competition has been noted above but funding has also been obtained for studentships from the college and university in what has been an extremely competitive climate. In terms of grant income, an application has been made during the period for major funding for the 'Watermarks in Manuscripts' project (and for postdoctoral research assistance) but these have been unsuccessful. A small amount of funding for equipment for this project has been obtained from the university's Strategic Research Fund and this clearly has been very beneficial. However, the Panel would encourage more dialogue between the unit and the various support officers within the university to see if further funding mechanisms may be exploited, particularly as the Department's strategy in the review period has been 'to direct any funding received towards student support and Gaeltacht activities'. It is difficult to see how all of the unit's major research projects can be advanced substantially in the short to medium term in the absence of the support which external research income can provide. This is also important in terms of the health of the discipline as it creates opportunities for postgraduate students. However, sabbatical leave has an important role to play in this as it provides the time and space to prepare grant applications and the Panel would urge the unit to consider mechanisms whereby sabbatical leave may be introduced on a rotating and cost-neutral basis. These could include greater collaboration across all three departments in the School in opening up elements of each unit's curriculum to each other; this might be beneficial to students in broadening their interdisciplinary horizons and, at the same time, help to alleviate the additional teaching burden occasioned by the absence of a member of staff on leave.

The research income of the Department has been demonstrated to be of a good standard.

Areas of good practice

Research-led teaching and its integration into the Department's overall research strategy is a particular area of good practice. The evidence of a growing consciousness of the benefits of public engagement and the importance of impact beyond the academy should also be noted as should the unit's increasingly strong links to Gaeltacht communities throughout the region. More generally, the continuing commitment of staff to the health of the discipline, and to the national and international profile of UCC in terms of its commitment to Irish and Celtic Studies, in spite of the harsh climate in evidence during the review period, should be acknowledged.

Recommendations for future development

Future development in terms of major research projects, in particular, is dependent to a considerable degree on the interlinked issues of staffing, sabbatical leave and external research income. The Panel would encourage all concerned to consider ways in which time could be freed up in order to maximise the potential of research income both in terms of advancing the unit's major research projects and providing opportunities for postgraduates (and, thereby, building capacity for the future).

Concluding statement

It is clear that the quality of the research and related activity is of a very good standard with some pockets of excellence. Graduate culture is strong although the unit would wish to be in a position to attract more students. Clearly, the funding climate has been difficult here, as it has been for research income more generally. There is a need to consider the latter more strategically, however, in collaboration with others in the university as this has the potential to impact positively on research agendas and the health of the discipline both within UCC and beyond. The research activity of the Department has been demonstrated to be of a very good standard.

Panel L: Early and Medieval Irish

Introduction

This report is based on 1) a self-assessment of the Department of Early and Medieval Irish, 2) a review of the research output by Remote Reviewers and Panel L, and 3) consultation of the staff and postgraduate students of the Department of Early and Medieval Irish during a site visit by Panel L, from 30 June to 2 July 2015. This second Research Quality Review report will, moreover, refer to the report of the first Research Quality Review, dated 2009, in order to estimate what progress has been made concerning research plans and points for improvement, noted therein. The unit currently has four permanent academic staff; the fourth joined the Department as a permanent member of staff recently, outside the period under review.

RAI 1 – Selected published output

Most of the selected published output of the Category A researchers (RAI 1) was deemed to be ranging from excellent (43%) to very good (40%) in terms of originality, significance and rigour. This published research, varying from world-leading work of the highest international quality to research of a very good standard, potentially sets the agenda for future investigations.

The Panel regards some of the publications as primary points of reference within the discipline: In Tenga Bithnua: The Evernew Tongue, the Historical Dictionary of Gaelic Placenames, and The End and Beyond: Medieval Irish Eschatology. It is noteworthy that these publications issue from research projects that are very significant for the Department's profile; they moreover represent the main areas for which the Department acquired external funding: the Apocrypha Hiberniae-, Locus-, and De

Finibus- projects. Thus, the Department has made its mark and name in the international Celticist academic community in the area of apocrypha, place name and eschatology studies. The Panel suggests that it would be worth considering introducing double-weighting for major outputs (such as the above-mentioned titles) in future Research Quality Reviews. Finally, the on-line projects designated Celtic Digital Initiative and Irish Sagas Online represent important digital resources, which are highly useful for the research and teaching activities of the international Celticist academic community.

The selected published output of the Department has been demonstrated to be of an excellent standard.

RAI 2 - Total published output

When the Panel assessed the total published output of the Category A researchers (RAI 2) for the period 2008–2014, they reviewed 50% of this output as excellent, 33% as very good, and the remainder as good. All of these assessments are done by international interdisciplinary norms, which result in an overall appreciation of the Department's publications as outstanding.

While the Panel respects the Department's decision not to involve Category B researchers in this Research Quality Review, we also express our regret. Given the generally high esteem and validation of their work, much of the Category B output would probably have been assessed as excellent. It may aid future Research Quality Reviews to employ a mature student to assist the Department in such administrative matters. If double-weighting were introduced in the procedure, the administrative burden would be further diminished. Last but not least, the Panel recommends that the communication of procedures concerning Category B researchers between administration and departments receives extra attention during the next Research Quality Review.

The total published output of the Department has been demonstrated to be of an excellent standard.

RAI 3 - Peer esteem

The review of the Department's Category A researcher's peer esteem (RAI 3) has resulted in an equally high-quality profile as RAI 2 (50% excellent, 33% very good, and 17% good). The same remark as mentioned above concerning the Category B researchers applies here.

The peer esteem activity of the Department has been demonstrated to be of an excellent standard.

Overall, the research output of the Department of Early and Medieval Irish was judged as very impressive in quality, quantity and (potential) impact. The Panel assesses half of the total output under review in the highest category, thus as excellent, internationally significant, and sometimes even world-leading work.

Finally, the Panel is impressed by the quantity of the output of the postgraduate students, although these publications are not under review here. They have produced one monograph, ten articles, three book chapters and nine book reviews within the review period.

The recognition of the quality of some postgraduates is evidenced by, on the one hand, their appointments as lecturers and research fellows/scholars and, on the other hand, the prizes and awards they have been given. For example, one PhD dissertation was awarded the Professor D. Simons Evans Prize for its Distinguished Contribution to Medieval Studies; the Societas Celtologica Europaea awarded another PhD dissertation with the Johann Kaspar Zeuss Prize for the best PhD thesis in Celtic Studies for 2014/2015; and an MPhil student was the winner of the first Johann Kaspar Zeuss Prize for the best MPhil thesis in Celtic Studies.

RAI 4 - Research-related activity

The Panel congratulates the Department of Early and Medieval Irish on their important and successful agenda of research-related activities. The Department's commendation as a 'powerfully robust research culture' during the last Research Quality Review applies to this period under review also. The Department's investment in manuscript, textual, literary and place name studies was clearly visibly in the nine conferences, various seminars, workshops and other research events that they organised. The De Finibus-project was very successfully present at the last Celtic Congress in Maynooth with a rich strand of Panel papers, and a two-day international conference was organised in Cork. The annual international Irish Texts Society Seminar, co-organised with the Department for Modern Irish, together with its yearly-published proceedings, is a landmark in Irish textual study. The Department held a Book of Lismore Colloquium in conjunction with an exhibition of the Book of Lismore at the Glucksman Library. This research event not only had societal impact as highlighted by the visit of former President Mary McAleese but also led to the publication of a substantial volume on the Book of Lismore. Further evidence of the Department's societal impact is their service to public media, and the admission of two members to the Order of St Gregory the Great. Their web-based activities (the Celtic Digital Initiative and Irish Sagas Online) are bound to have a much broader user base than the academic community alone.

In the area of transdisciplinary and other collaborative activities, the Department is once more impressively engaged: examples include their involvement in Research Centres in the School of History (the CELT project, and the Centre for Neo-Latin Studies), and their collaboration with the Department of Modern Irish concerning the above-mentioned Irish Texts Society seminars and publications, and the 2012 conference on Agallamh na Seanórach, followed by its published proceedings. Clearly, the above-mentioned key areas of the Department (apocrypha, eschatological and place name studies) are exemplary areas for collaboration and the Department has used its expertise and network well for engaging in same.

The national and international activity of members of the Department as keynote, plenary and invited speakers, board members, external examiners, referees, and their honorary conferrings (notably three memberships of the Royal Irish Academy) is further proof of their peer esteem and their service to the international academic community.

The research-related activity of the Department has been demonstrated to be of an excellent standard.

RAI 5 – Postgraduate research education

The Department has ten PhD students at the moment. Six PhDs, one MPhil, and nine MAs were awarded during the period under review (some of them receiving prizes, see above). In addition, there are eleven MA students and, while the MA programmes are not within the scope of this review, the Panel considered them to be an important part of the research training and research culture of the Department, as the MA programme focusses on training in research editing skills resulting in a completed piece of original research, and may underpin later PhD study.

The report of the previous Research Quality Review gleaned information about the programmes of postgraduate training from the site visit; the documentation of the present Research Quality Review displays an enviably rich programme for MA and PhD students. If they follow all these courses with good results, it is obvious that the Department will have thoroughly trained future Celticists, which applies especially to the PhD students. The Department supports PhD students to raise their professional profiles, which is necessary for future jobs and Post-Doc positions. Presenting papers, writing articles and gaining experience in teaching are not only time-consuming activities but also enable PhD students to develop their research project further to the benefit of their PhD thesis.

Another praiseworthy activity is the weekly research seminar, at which twelve distinguished guest speakers from Ireland and abroad have contributed during the period under review. Such an initiative not only trains students but also establishes and maintains cohesiveness in the Department as a whole.

That the Department is an attractive centre of learning may also be concluded from the numbers of visiting (foreign) scholars who use their grants to be temporarily based in Cork. It is disconcerting to see that a Department with such an excellent staff, who are so dedicated to training students and who take care to financially support them in order to enable conference attendance, have inadequate study space for their postgraduates. The grossly inadequate accommodation for workspace for postgraduate students of Early & Medieval and Modern Irish (place for six; need for thirty) was brought to the University's attention during the first

Research Quality Review. This problem has not been solved in the period under review; the Panel therefore urgently requests that the University examine this further. That the Department, moreover, has engaged in bringing up a lecture room to the normal UCC standard from the Department's budget is a situation that will surely need to be recompensed. Housing budgets usually belong to the overall University organisation, and the Panel has little doubt that this is the case for UCC as well.

The previous Research Quality Review report mentions the deplorable temporary freeze on funding for part-time teaching; the Panel was informed that, while funding is no longer frozen, it has been decreased. Junior teaching jobs are no longer based on six or nine month contracts but junior teachers are paid low salaries on an hourly basis. Even though the situation has improved a little, the Panel is very concerned about the decrease of financial security for these temporary members of staff. Another point of attention rising from the previous Research Quality Review is the inadequate funding for support of postgraduate conferences; this problem has worsened in the review period. Further problems noted are the limited financial means for postgraduate students for interlibrary loans, and for travel to other universities for study and conference attendance.

The Panel applauds the postgraduate students' initiative for peer-support or intervention by having established a weekly student-led seminar. In this way, they train themselves in giving and receiving feedback on presented and/or written work, and they dedicate some seminars to certain themes, such as how to find funding for future research, how to get published, how to cope with concrete problems during research. As mentioned above, the Department's postgraduate activities, presence at international conferences and publications are impressive and laudable.

The Panel notes that the Department offers a fine range of courses, which are open to both MA and PhD students together. The Panel suggests that it might be an idea to diversify in this, so that the courses can be aimed at different levels. Because PhD students are supposed to work more independently and need to focus on their research for longer stretches of time, intensive courses, such as the Palaeography and Manuscript-based Research Intensive Postgraduate Workshop, seem to be better suited to them. Moreover, PhD students from other



universities may easily attend such intensive courses, and the aforementioned workshop is, in fact, a national service. The Panel additionally suggests that such an intensive teaching programme opens up collaboration between national/cross-border universities in that they might alternate in offering annual national PhD courses. An initiative like this would decrease the teaching load of staff members and increase the variety of courses taught at a high level to PhD students even more.

The postgraduate research education of the Department has been demonstrated to be of an excellent standard.

RAI 6 - Research income

The Department appears to have done well in the area of securing external and internal funding for research activities. To start with the former: the De Finibus grant from the IRCHSS is impressive (€217,091). Furthermore, the Locus project has been successful in acquiring various forms of funding. It is, however, not clear how much this is precisely. The Research Statement mentions €64,000 for two PhD scholarships, whereas the appendix lists €16,000 for only one of these (funded by the Department of Community, Rural and Gaeltacht Affairs). The other forms of funding for Locus amount to €13,000 (the Heritage Council; Dún Laoi Teoranta). The Society for the Study of Medieval Languages and Literature has co-funded five intensive postgraduate workshops, amounting to €3,439. Two small personal research grants brought in €5,500 for the Department (the IRCHSS; the Gerda Henkel Foundation).

Internal funding supplied further financial support for the intensive postgraduate workshops (€5,160; the sixth workshop was funded by the CACSSS only). Noting that internal funding is gained through competition, the Department is again doing well. The CACSSS awarded several publication grants to the Department (€4,000), made a conference possible (€1,000), and rewarded one member of the Department with a CACSSS Research Achievement Award (€10,000).

The Locus project is currently considering new funding proposals. The externally-funded work on apocrypha is ongoing. The De Finibus project, which covered the whole review period, met and even exceeded its original stated aims. The Panel suggests building upon this success:

the Department might consider taking up another of its interests – cosmology – in order to broaden the scope of eschatology, which may lead to further future collaborations with other (academic) institutions and may perhaps be a good basis for acquiring new funding.

Because the current academic climate appears to value the listing of exact sums, which have been acquired and to value highly the recording of precise research income, it may be helpful to trace such information in future instead of verbally mentioning a number of scholarships, or ad hoc expenses. Because of these lacunae, the Panel cannot precisely calculate the total of research income as was done in the previous Research Quality Review. The total sum would amount to well over €323,190. Considering the fact that there was a severe economic recession during the review period, this is impressive.

The research income of the Department has been demonstrated to be of a very good standard.

Areas of good practice

The Department has an excellent publication profile, does well in securing funding and lives up to the expectations with the acquired funds. They appear to be an example to follow in the area of postgraduate research activities. There is a secure structure for supervision, complemented by a postgraduate initiative of intervention. The practice of offering high-level intensive courses is an initiative of (inter-)national relevance and deserves to be expanded in a national and cross-border collaboration enterprise.

Recommendations for future development

It appears that the Department could do with more financial support from the University in the areas of housing, travel budgets and funding for postgraduate activities. It is to be hoped that the remarkable situation of the Department having paid for the improvement of a lecture room will be compensated.

The situation of JYA monies was a point of concern in the previous Research Quality Review report; they appear to be frozen at present, which makes this a case of even greater concern now.



The current state of sabbatical leave is open for improvement in line with international standards. If a member of staff has gained such leave of absence, they are still entitled to their salary and the Panel recommends that the University increases the necessary supports to facilitate this, be it in the context of assistance with funding proposals or replacements for teaching duties.

Concluding statement

The excellent publication profile and peer esteem; the outstanding organisation of research activities; the fine structure of training, supervising and inspiring postgraduate students; and the consistent and successful efforts to gain funding for research activities all lead to an overall assessment of 'excellent' for the Department of Early and Medieval Irish.

The research activity of the Department has been demonstrated to be excellent and of leading international standard.

Panel L: Béaloideas / Folklore & Ethnology

Introduction

This second review exercise by University College Cork shows a welcome commitment to supporting and maintaining a research-led culture. A similar exercise has now been undertaken at NUI Galway.

RAI 1 - Selected published output & RAI 2 - Total published output & RAI 3 - Peer esteem

This small unit clearly has a steady research output in different media. The published outputs were presented in both English and Irish (RAI 1). The standard of published outputs was equally impressive in both languages, satisfactorily addressing the concern raised about publishing in Irish only in the last review. Research follows a number of pathways, from urban field research, with the Cork Folklore project, to theoretical and historical approaches to popular culture and folklore. The public folklore initiative, an approach not well known in the Irish paradigm, although common in the US and Canada, is a unique ground breaking project with major research potential yet to be fully realised.

The Panel viewed the scope and ambition of the work submitted as an indicator that a strong research culture pervades the unit. The journal *Béascna*, is produced in the Department to rigorous academic and presentational standards. Staff also publish in this journal, undergoing the same rigorous peer-review as external contributors. The *Léann Dúchais Leictreonach* initiative and other digital outputs show strong development in the online area. The impression is of a hard working team struggling to keep abreast of its teaching and research commitments.

Conference attendance is high with research groups presenting Panels at international meetings e.g. SIEF (The International Society for Ethnology and Folklore).

Invitations to speak and teaching appointments at other institutions also clearly signal the unit's high esteem among international peers. *Béascna* is now regarded as a leading forum for publishing in Folklore. Staff publications are standard items on postgraduate reading lists in other institutions for students studying through Irish. Recent publications, encompassing a great deal of current scholarship, provide sterling models of writing and research for young scholars to emulate.

Both the selected published output and the total published output of the Department have been demonstrated to be of a very good standard.

The peer esteem activity of the Department has been demonstrated to be to be of an excellent standard.

RAI 4 - Research-related activity

Unique to Ireland, the Cork Folklore Project (CFP), represents a burgeoning and highly commendable aspect of the Department's research activities exhibiting a high level of social responsibility. As reported in the last review, CFP is on the leading edge of development. One staff member bears the majority of the responsibility for managing and directing the CFP with restricted administrative support. *Léann Dúchais Leictreonach* is a similarly exemplary initiative encompassing ethnographic fieldwork, textual production and an online dimension. The website *Sean-nós Beo* shows research-related initiatives combining successfully with community outreach. The fact that MA students are not counted for research is detrimental to the Department's profile. Masters' level study remains a significant indicator of activity in Humanities oriented research.

The research-related activity of the Department has been demonstrated to be of an excellent standard.

RAI 5 - Postgraduate research education

There are four Doctoral students and four Masters students. About seventy students take the programme in 1BA with numbers falling to approximately ten in 2BA and 3BA. Approximately thirty students take the Irish language stream in 1BA. The Panel was surprised to learn that modules in the Irish language stream are not currently available to students in 2BA and 3BA *Nua-Ghaeilge*. A new MA programme in Folklore is in place but currently has no registered students. Postgraduate student profiles lean towards older adults returning to education. Students' erudite and polished presentations of their projects impressed the Panel. Access to undergraduate populations in *Nua-Ghaeilge* has real potential to further develop the postgraduate profile in the Department. Such access is essential to the Department's future.

The postgraduate research education of the Department has been demonstrated to be of a good standard.

RAI 6 - Research income

Like all Humanities oriented programmes, the unit has suffered because of the ongoing financial recession, which is a real cause for concern. Targeted Initiative funds from HEA and the University have been

significantly reduced as have supports from the Heritage Council and local authority bodies. The Department has begun to explore alternative sources. Department projects have successfully attracted regular funding through open peer-reviewed competition from IRC and a recent HERA application was unsuccessful. The Panel learned that other applications are currently active.

The research income activity of the Department has been demonstrated to be of a good standard.

Areas of good practice

High levels of engagement by unit members indicate that the teaching, research and archival responsibilities are well integrated.

The Léann Dúchais Leictreonach initiative to provide an online web page to support a publication on women's experiences from the Gaeltacht areas of Ireland will significantly address the gender bias toward male experience found in many folklore records.

Collaboration with Raidió na Gaeltachta to publish the Joe Daly radio series indicates a keen awareness of achievable small projects with potential for considerable impact.

The Kevin Danaher Lecture commemorates the Department's founding scholar and represents welcome public outreach.

The first year essay Draddy prize is a commendable way to recognise excellent undergraduate work and the sponsorship of Corn Bhab Feiritéar at an tOireachtas for the performance of storytelling promotes the connection between Folklore as a research discipline and the artists that continue to practice storytelling, however, attenuated their modern contexts.

A student's success in open competition across the University at the annual doctoral showcase presentations testifies to the unit's high research standards. Béascna provides another strong indicator of excellence in this category.

Recommendations for future development

The removal of internal structural obstacles currently preventing students in BA Nua-Ghaeilge from taking modules through Irish in Béaloideas would expose greater numbers of UCC students to the considerable archival and other resources of the unit.

The provision of a secure study/storage space for postgraduate students is an urgent need.

Assisting the Department's attempts to have Béascna included in an online database such as JStor, would raise the journal's profile and impact considerably.

The Panel noted that the Department has been without a Chair since 2004 and recommends that this vacancy be addressed with a strategic appointment to provide the necessary research leadership. This might be linked to the centenary of the birth of the poet Seán Ó Riordáin in 1916 which would also create a possible avenue for further collaboration with Modern Irish.

Currently in the Irish University sector, there is considerable focus on external and especially EU funding. The unit has competed successfully in IRC applications and could potentially gain a greater share of this fund. The Marie Curie, COST, HERA and Horizon 2020 schemes present possibilities. The unit's HERA bid, although unsuccessful, shows that it has begun to engage with these bodies.

It would be beneficial for the unit to leverage support from UCC research office with regard to designing a project, built around the CFP, for example, to attract major funding and additional staff for this highly functioning unit.

Central provision at University level of more officers to support Humanities projects would be welcome. This would enable the unit to recruit larger numbers of postgraduates and postdoctoral fellows, with which to realise more fully the superb research potential of the Department's archival and human resources.

Concluding statement

Research activity by a small, dedicated team is of a high standard. A worrying impression of inadequate resourcing seems to reflect some attenuation in the overall high levels of performance. The provision of a Chair to lead research as PI would help the unit enhance an impressive but currently somewhat hampered research profile.

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel L: Overall comment

Overall the quality of the research and related activity is of a very good standard with pockets of excellence in all three units. The units are placed firmly within scores of 'very good' and 'excellent'.

Individual research and graduate culture is strong in the Department of Modern Irish with the potential to attract more students in collaboration with the other units and with support from within the university. This is particularly evident in the context of housing for graduates. Clearly, the funding climate has been difficult here as it has been for research income more generally. There is a need to consider the latter more strategically, in collaboration with others in the university to impact positively on research agendas and the health of the discipline both within UCC and beyond.

The excellent research output, the outstanding organisation of research activities, the fine structure of training, supervising and inspiring postgraduate students; and the consistent and successful efforts to gain funding for research activities all lead to an overall assessment of 'excellent' for the Department of Early and Medieval Irish.

Research activity by a small but capable and dedicated team is of a high standard in the Department of Béaloideas / Folklore & Ethnology. Clearly the impact of this Department's research on the academic and wider

community is to be applauded. A worrying impression of inadequate resourcing seems to reflect some attenuation in the overall high levels of performance which impacts on Béaloideas / Folklore & Ethnology. The provision of a Chair to lead research as PI would help the unit enhance an already impressive research profile.

Panel L: Commendations & Recommendations

Commendations: The Research Quality Review Steering Group is to be commended on the innovative approach taken to the Research Quality Review and the three units reviewed by Panel L are to be commended highly on their engagement with the process. While some discrepancies arose in the submission of the information required as outlined in the unit reports from this Panel this was rectified where possible when further information or clarification was requested on the site visit. The three-day site visit which was particularly productive highlights the importance of this level of engagement in a review of this scale. The Panel would like to thank all Heads of units, Staff members and Postgraduate students for the very professional and warm manner in which the unit visits were conducted. This provided a valuable contextual and environmental overview of the workings of the unit and also provided insights on the practical aspects of such a review where human resources are key to collaborative research projects.

Recommendations: Individual research is highly regarded and globally across the three units the research was demonstrably of a very good standard with some pockets of excellence across all units, especially in the case of the Department of Early and Medieval Irish. The Panel recommends that collaborative possibilities arising from related research activities be explored. This is being done to some extent with inter-departmental conferences for example, and if this were to be examined further in light of funding schemes it could produce significant results for these areas in a collective sense.

In order to enhance best practice and maximise

opportunities, the Panel recommends that the benefits of the formation of a cross-School Research Committee (which would include representatives of all three units) be considered. This Research Committee would link the School more directly to the College Research Committee and would ensure that all units, staff, and students are aware of funding opportunities as they arise. This would provide further avenues for coordination of research activity to extend the external profile of the units within the university and beyond, and increasing visibility for all.

There is a very robust postgraduate community in all units with clear evidence of collaboration and supports of the highest standards between supervisors, students and staff. However, the Panel recommends that mechanisms and pathways for progression are made explicit, especially in the context of the structured PhD.

The Panel recommends that the research space provision for postgraduate students is reviewed with UCC Buildings. Clearly the space is inadequate which is also problematic in that it does not provide a secure location for students to leave research materials if they need to leave the room.

The Graduate Seminars within the School have laid a solid foundation for academic exchange and interaction among students. This could be utilised further if adequate space were provided and it could also be built upon in an interdisciplinary context across the three units. The Panel also recommends that a structured method of conference attendance funding be explored by the Heads of the three units.

The Panel notes that the Chair in Béaloideas / Folklore & Ethnology has been vacant since 2004. In order to provide adequate research leadership in a burgeoning discipline the Panel suggests that consideration be given to the filling of this Chair.

Due to the workload involved in language teaching the Panel recommends that the provision of tutors in Modern Irish be aligned with the provision of University Teachers for other languages. This would free up the teaching load of the lecturers to enable them to engage and to spend more time on their individual research while also



exploring new research avenues in a collaborative and perhaps international context.

Structural constraints currently prevent students in Nua-Ghaeilge from accessing undersubscribed modules taught through Irish in Béaloideas. The Panel suggests that removal of these constraints could strongly support Béaloideas/Folklore & Ethnology and relieve the teaching burden/workload of lecturers in Modern Irish while contributing to additional benefits in terms of the facilitation of sabbatical leave.

The Panel recommends that a structured rota system which will ensure teaching provision in a realistic way be explored in collaboration with the University Research Office to facilitate sabbatical leave in keeping with international standards and best practice.

Panel L: Recommendations to the University

The Panel would firstly like to commend UCC for undertaking this Research Quality Review and for the pioneering leadership that has been demonstrated by doing so. Panel L welcomes the professional and courteous manner in which the Research Quality Review was conducted throughout. The supportive framework in which the site visits took place added significantly to the review process and to its findings.

The Panel have been mindful throughout that this is not a standard requirement within the Higher Education System and that this sometimes resulted in guidelines which could not always be adhered to. Each review process creates a learning curve from which new and interesting insights can be gained both in the context of the results of the review and of the process employed.

Below are a few recommendations to the University to be taken in the context of the above:

- Institutional engagement with provision of data for the review was not always consistent. Allowing for the diversity of disciplines and the scale of the review, this is perfectly understandable; however, inadequate information/data sometimes led to confusion and unnecessary doubling of work which could have been avoided. In this light it would be helpful therefore if the amount of work, the exact tasks and the format of the document to be produced were to be transparently communicated to Panel members when they are invited to participate.
- The Remote Reviewing system lacked consistency in the context of the research quality standard and the review material. Also, although Remote Reviewers' scores were ready in April, they were only forwarded in June which was a source of some unnecessary frustration in trying to meet deadlines. When the Remote Reviewers are asked to offer verbal explanation of their scores it would be helpful if they were given a minimum amount of words to write, and asked to explain all their scores. In this way, the DVCs could indeed summarise the Remote Reviewers' reports instead of elaborating on them as was sometimes the case for this review.
- A visit to the Library to view the resources and especially the Special Collections would create a better overall picture of the resource material available to students. This is particularly relevant for this Panel where inter-library loans and conference funding were presented as a significant block to quality international research.
- The lack of uniformity in the provision of statistical evidence with regard to research students and research income was very problematic in assessing these areas. It would be helpful if this information was provided in detail before the site visit with clear demarcation of the types of funding (internal/external/postgraduate/awards/national funding bodies/international funding bodies/publications), and postgraduate student profiles. Perhaps a template for these two areas could be devised for ease of reference.
- While the site visit was serviced and accommodated to the highest standards lack of certainty regarding internet connections/wifi was somewhat challenging at times, especially when drafting the final report.
- Acknowledging that it is difficult to maintain absolute consistency, a broader issue with regard to consistency across Panels for future Research Quality Reviews exists. In the context of the utilisation of the current Review for future strategic university planning and decision-making, the Panel would have reservations with regard to the relevance of cross-comparison between units and Schools within the University as review criteria and discipline norms require further in-depth analysis to ensure fair comparison.

Panel M Report

Units in Panel M

Asian Studies
 French
 German
 Italian
 Spanish, Portuguese & Latin American Studies

Panel M members

Chair: **Professor Margaret Topping**,
 Queen's University Belfast
 DVC for Asian Studies: **Professor Jos Gamble**,
 Royal Holloway, University of London
 DVC for French: **Professor Florence Myles**,
 University of Essex
 DVC for German: **Dr Marina Foschi Albert**,
 University of Pisa
 DVC for Italian: **Professor Guido Bonsaver**,
 Oxford University
 DVC for SPLAS: **Professor Catherine Boyle**,
 King's College London

Overview

The Panel would like to acknowledge, first and foremost, the vibrant research culture that has been created and continues to thrive in the departments it reviewed, notwithstanding the exceptionally challenging financial circumstances that have impacted and inevitably continue to impact on research activity at UCC. The Panel noted in particular the enthusiasm, the energy and the culture of possibility that is being fostered at all levels: postgraduates, early-career researchers and established/senior colleagues.

The Panel also viewed the creation of the School of Languages, Literatures and Cultures as a very positive development in terms of supporting research culture. There is clear evidence of what has already been achieved by the new structure in a relatively short period of time. Many of the cross-cutting recommendations included in the summary relate to how the School structure might be harnessed further, both to share good practice and to develop a culture of shared leadership which will enable colleagues in languages to reach the highest levels of research performance. While we recognise that one of the departments reviewed is not part of the new School

of Languages, Literatures and Cultures, the Panel is confident that the recommendations relating to the role of the School structures as providing opportunities for shared leadership are equally relevant to its wider School structure.

Process

Prior to the site visit, the Disciplinary Vice-Chairs reviewed the external assessors' scores and read a wide sample of outputs within their sub-Panel. The Panel Chair also reviewed outputs and external assessors' scores across all of the subpanels to ensure consistency. Any perceived anomalies were addressed during the site visit when final moderation took place, and the Panel is satisfied that the grading of outputs has been fair and consistent across the subject areas. The Panel also agreed scores for RAIs 4-6 together.

The site visit allowed the Panel to meet staff and postgraduate students within each Department, as well as members of senior management in the College and University. We had ample opportunity to raise any concerns or ask any questions of these different stakeholder groups.

Panel M: Asian Studies

Introduction

Prior to 2012-14, this unit had focused solely on Chinese Studies. The focus has broadened to encompass Asian Studies – incorporating Korea and Japan as well as China. It ended the review period with four Category A staff: one Professor and three Lecturers. Approval has also been given for a fifth post, in Chinese Studies. Notably, this is the only unit of its kind in the Republic of Ireland.

It is worth noting that, in significant respects, the unit assessed here differs substantively from that assessed in the previous RQR. In part, this reflects the shift from Chinese Studies to Asian Studies. Moreover, the four staff whose research outputs are assessed in this RQR are all fairly recent appointments, having been appointed to their current posts between late 2012 and 2014. The unit has, no doubt, had to deal with a considerable amount of change in a short space of time.

Staff in the unit have produced a wide variety of outputs that address a range of diverging topics. Reports were received from two remote reviewers, and these form the basis of the scores for RAI 1-3. The two reviewers were substantially in agreement; their scores were also confirmed by the RQR Panel and moderated in a couple of instances. When moderation took place, this had no appreciable impact on the overall scores.

RAI 1 - Selected published output

The review of selected published output focused on the five items chosen by individual staff members. There was much good quality work, with 63% judged to be very good and above. There was, though, rather little at excellent level and the proportion of book chapters was quite high. It may be worth noting that, in many UK university departments, book chapters were not permissible as submissions for the recent REF.

The selected published output of the unit has been demonstrated to be of a very good standard.

RAI 2 - Total published output

In most cases, total published output for the period does not differ appreciably from the selected published output. Correspondingly, as in the case of RAI 1, there was much good quality work, with 63% judged to be 'very good' or above.

More broadly, assessing total output does not seem an especially meaningful indicator; producing high-quality outputs is time-consuming and journals' reviewing process is frequently lengthy. Consequently, high-quality outputs, while much more influential, are likely to be small in number.

The total published output of the unit has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

The assessment of peer esteem is consistent with the differing career stages of the staff being assessed with all being assessed as 'good' or above and 75% as 'very good' or above.

The peer esteem of Asian Studies has been demonstrated to be of a very good standard.

RAI 4 - Research-related activity

While the unit is small, it has been active in research-related activities. These include conferences and workshops. Notable events include conferences held at UCC by the Irish Institute of Korean Studies (2013), the Asian Studies Ireland Association (2012), and the inaugural Irish Institute of Japanese Studies (2011).

In addition to academic conferences, there has also been broader engagement, such as an industry briefing and workshop for the Irish Agri-Food sector in May 2014. This is clearly a valuable activity in an open economy like Ireland. Inevitably, such activities can be time-

consuming; the time devoted to them and academic research needs to be carefully balanced. That said, such engagement with non-specialist users could contribute to meaningful 'impact' beyond the academic world - a dimension that has become increasingly important in research assessment exercises in the UK in recent years. The research-related activity of the unit has been demonstrated to be of a very good standard.

RAI 5 - Postgraduate research education

At the time of the previous head of unit's departure in 2013 there were 14 PhD students. Of these, half transferred with her to Australia. Subsequently, the unit has focused upon ensuring those who remained complete their PhD studies successfully. This has been accompanied by an emphasis upon quality in the recruitment of PhD students. This has resulted in a reduction in numbers, but is a vital step. Inevitably, it will also take time for potential students to become aware of the specialisms of the unit's current staff make-up.

Information provided about PhD topics studied and completion rates was rather patchy. Postgraduate students have taken part in a number of conferences and have participated in publications. These include for instance, a single authored paper in the International Journal of China Studies. We were not able to meet any PhD students during the site visit.

Evidence of an interesting array of PhD student seminars is provided from February to May 2010. The topics covered are quite wide-ranging, although with a focus upon sport (reflecting the interests of the previous head of the unit). It would be good to ensure that such seminars are a regular event.

The postgraduate research education of the unit has been demonstrated to be of a good standard.

RAI 6 - Research income

Levels of research income are modest. The research statement notes that the unit has not been provided with details on research income for 2008-9 or 2013-14. It is not obvious why this should be the case. The document also points out that some research income may not be captured within the figures provided during the period 2009-13. It is extremely welcome to see that funding applications are in preparation and/or appropriate funding sources are actively being sought.

The research income activity of the unit has been demonstrated to be of a fair standard.

Areas of good practice

Given the limited range of Asian Studies research in Ireland and the small size of this unit, there is a choice between a narrow but deep focus or a broader range of coverage. UCC has taken the latter route; in terms of developing further interest in Asian Studies in Ireland this seems a sensible approach.

- It is very welcome that the Chair post has been maintained and reinvigorated with a new appointment.

This demonstrates the College's commitment, and is important to ensure leadership and encourage further growth within the unit.

- The unit's contribution to developing the Irish Association of Asian Studies is to be commended.
- Considerable portions of teaching are research-led. This should be beneficial both to teaching quality and research.
- Raising the quality of new PhD recruits is desirable. While this will reduce numbers, at least in the short term, weak PhD candidates drain staff resources and have a negative impact both on perceptions of the Department and on completion rates.

Recommendations for future development

- To match international leading departments, the unit should re-double efforts to increase its publications in high impact, international peer-reviewed journals and on the production of high quality monographs which would enhance its international profile.
- Attention should be devoted to increasing grant income. The unit's members could profit from spending time to reflect on this dimension and research strategy (including publication) more broadly. It might be most beneficial if this discussion takes place at a rather broader level, such as with colleagues in the School of Languages or those in some other Department with a high level of research activity.
- Regular research appraisals would be a valuable part of mentoring. Given that the unit is small, again, it would be valuable to ensure that this takes place, at least occasionally, beyond the confines of the unit. This can ensure new ideas are transmitted and good practice diffused across departments.
- The teaching workload appears to be quite onerous. It was explained that there has been some rationalisation of teaching. However, is there further scope to reduce teaching workload so as to free up more time for research? More generally, an open and transparent workload model would help ensure equity (both in practice and perception) within and between departments.
- Is it possible to develop stronger links between undergraduate and masters level provision on Asian Studies and research in this area? For instance, might there be possibilities to encourage progression of suitable candidates to research degrees?
- Large numbers of undergraduate and masters students undertake work placements. Is there potential to develop these links for research purposes?
- Regular PhD student seminars would help foster a lively research atmosphere and integrate research students better into the Department.
- As highlighted in the 2009 RQR, arranging sabbatical cover still appears to be a problem. Regular sabbaticals underpin good quality research.
- It would be good practice to ensure that research income brought in by staff members is tracked more consistently. Ideally this should be done centrally, as indicated in the documentation provided for this review.
- Providing briefing sessions to businesses could be a way to increase the impact of the unit's research activity, heighten its visibility, and perhaps also provide a way to increase research income. In addition, it can be one activity in which the unit's members can all cooperate and participate given that they each "represent" a different Asian country.

Concluding statement

The unit possesses research strengths based upon long-term study and linguistic competence in major East Asian languages. There is much to be commended as well as considerable potential for further development.

The research activity of the unit has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel M: French

Introduction

This report is based on the documentation received prior to the visit to UCC on 5-7 May 2015, as well as on evidence produced during the visit and as a result of discussions with UCC colleagues in a range of university positions (Central Services, College, School, Department). The research of eight members of staff was evaluated by the Panel, including one ECR and one Emeritus. Each member of staff submitted five outputs for consideration, except the ECR who submitted three, and one member of staff who only submitted two. As well as submitted outputs, the Panel reviewed the total number of outputs published during the review period, the research environment and the esteem in which members of the Department are held nationally and internationally. The postgraduate education and research income were also the object of scrutiny.

RAI 1 – Selected published output and RAI 2 – Total published output

The Department of French is multidisciplinary, as is often the case in the discipline, including research in Literature, Culture, Linguistics, Art, Philosophy and Translation. This makes it an ideal place for interdisciplinary collaboration, both internally and externally, and evidence is provided that its inclusion in a larger School has facilitated such developments, within the context of CASiLaC, for example. Members of the Department are active in the newly established research centres and clusters at the level of the College. These centres/clusters have the potential to enhance interdisciplinarity and collaboration greatly, and there is evidence that it is already starting to happen, for example with the organisation of thematic cross-disciplinary conferences. The Panel welcomed these new initiatives which will need to be actively supported and facilitated in order to fully develop.

The infrastructure supporting research has improved over the review period, for example in supporting sabbatical leave, which has benefited members of the Department. Similarly, limited funds have been made available to staff to facilitate research, on the basis of a competitive bidding process, and these funds have been used by members of the Department for conference attendance and for the pump-priming of research projects. Additional new developments which have undoubtedly benefited the Department are the appointment of research support officers both at the level of the College and the School, as well as various initiatives to support the writing of large grant applications. The instantiation

of bi-annual research mentoring by the Head of Department is also to be welcomed.

The Department has been able to sustain its research collections and online resources, which is invaluable in the current research climate; it is unfortunate, however, that in a discipline in which books remain the predominant output, the library budget for books has been severely slashed.

During the review period, the Department has been very active in its engagement with academics, practitioners and the local community, through a range of initiatives such as the interdisciplinary 'Mediterranean' project which involved an exhibition as well as round-table discussions, or the Cork French Film Festival, to name but a few. Academics in the Department are well networked nationally and internationally, and many sit on the executive committees of learned societies and associations.

The Department produced a wide range of outputs during the review period, reflective of its breadth of research interests, within and beyond French studies. In terms of research intensity, the Panel noted much variability, with some staff publishing a large number of outputs, while others did not. The Panel judged all the outputs submitted to be of at least 'good' quality, with the majority being ranked 'very good' and a small number rated 'excellent'. The outputs submitted represented a wide range of outlets, from monographs, edited collections, book chapters to journal articles.

Both the selected published output and the total published output of the Department have been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

The Panel believed that the Department's research outputs could increase their visibility and impact on current debates within the discipline(s) by being published in high impact international peer-reviewed journals, or, in the case of books, placed with more prestigious established publishers with stronger distribution networks.

The peer esteem activity of the Department has been demonstrated to be of a very good standard.

Overall, the Panel was impressed both by the level of research activity in the Department and its quality.

RAI 4 - Research-related activity

The Department has been severely hit by the financial crisis and a period of sustained change, losing three academic posts during the review period, with student numbers remaining stable. This has led to increased workloads, which might have had a detrimental impact on research activity.

In spite of these difficult circumstances, the Department has engaged in a wide range of activities, evidence of an active and lively departmental research culture. For example, the Department held: 31 seminars as part of its seminar series, hosting many prominent external speakers; public lectures/events; numerous outreach

activities in the local community; some workshops and major international conferences. Additionally, many conference papers were delivered by members of the Department at international conferences during the review period.

As in the case of outputs, research-related activity remained at a high level in spite of the difficult context, and members of the Department were active participants in the research landscape of the discipline, both within UCC and beyond, playing an important role in some of the new research clusters and Centres, as well as nationally and internationally.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 - Postgraduate research education

Seven PhD students completed within the timeframe of the review period. This is not a large number, but it is in keeping with general trends in Modern Languages, where the take-up of postgraduate study is limited. There are currently eight PhD students registered, suggesting a slight upward trend.

Members of the Panel met with four of the current PhD cohort, and this meeting reinforced the impression gained from the documentation of an engaged and lively cohort, well supported and well integrated within the research fabric of the Department, for example in the seminar series and conferences organised by the Department, as well as publications. The research students were unanimous in praising the new interdisciplinary research clusters, within which they feel well integrated and which provide them with welcome cross-departmental dialogue.

Additionally, comprehensive research training is provided (although the lack of training in writing in Academic French was mentioned as a gap), and robust annual review mechanisms are in place. Facilities, however, are rather limited, with just one office for all of them, with three desks and a single computer to be shared.

The postgraduate research education of the Department has been demonstrated to be of a good standard.

RAI 6 - Research income

The Department has increased its research income compared to the previous review period, to over €600,000, a large proportion of this funding for the support of doctoral and postdoctoral work. The main source of income is the Irish Research Council (72%) but a range of other funding sources have also been accessed, with more limited success. The Department has also made good use of university funding to pump-prime projects.

It would appear that all members of staff have been actively engaged in seeking funding. Mechanisms have been put in place to support grant applications, such as the appointment of research support officers at School and College levels, and the bi-annual one-to-one mentoring carried out by the Head of Department.

The amounts sought have so far been relatively small,

but the support put in place at School and College levels should help in raising ambitions and targeting e.g. larger European grants.

Overall, the Department has a strong culture of bidding for grants inclusive of all staff, and a good track record of success in obtaining funds, especially to support research students.

The research income activity of the Department has been demonstrated to be of a good standard.

Areas of good practice

The Panel noted many areas of good practice, for which the Department needs to be commended. Of particular note:

- A strong and vibrant research culture, with good mentoring mechanisms in place to support staff and robust monitoring of doctoral students;
- An excellent level of engagement with both the academic community and 'research users' (practitioners; professionals; general public);
- A strong culture of grant writing, supported by good mechanisms, involving all staff;
- An enthusiastic response to the new interdisciplinary opportunities offered by the creation of research clusters, within the context of the reconfigured School/College.

Recommendations for future development

The Panel recommends the following areas for further development:

- The development of a publication strategy whereby outlets are targeted which ensure optimum visibility and impact for the research carried out in the Department (high ranking international journals; prestigious publishers);
- The new interdisciplinary collaborative initiatives should be developed and strengthened;
- The strong and inclusive grant writing research culture should be capitalised on to lead to more ambitious bids (linked to the new research clusters);
- The development of a clear research strategy for the Department.

Concluding statement

Overall, the Department is to be commended in having performed very well indeed in difficult circumstances, and in making the most of the new opportunities offered by interdisciplinary developments at the level of the School and College.

The loss of staff and resources in the Department since the last review could have endangered the health and vitality of this unit. It is important for the situation to be stabilised in order to prevent further erosion.

The establishment of the School has had a positive effect on the Department, in providing a helpful infrastructure which staff have found enabling. In particular, the new interdisciplinary research clusters are a promising new development, which should lead to innovative projects and outputs. It will be important that these cross-disciplinary research groupings are properly supported if full benefit is to be achieved.

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel M: German

Introduction

The Department of German considers its academic mission, in accordance with the Statement provided for the present Research Quality Review, as three-fold:

1. To train students to become competent users of German and effective mediators between cultures;
2. To promote students' intellectual life and stimulate their curiosity; to develop and train their skills in independent analysis and critical interpretation through the study of German literary, artistic and cultural movements in the context of our common European intellectual heritage;
3. To cultivate individual and cooperative research and teaching activities in the various areas of German and comparative literature and culture, linguistics and language education to the highest international standards.



The Department of German at UCC offers a wide selection of degree programmes (three year programmes, four year programmes and evening courses) to BA Arts Students, BA International degree, BA World Languages, and BComm (International) with German students. The Department also offers German as an optional minor subject to students in the degree programmes of Civil and Environmental Engineering, Computer Science, Geology, Government, Law and Social Science as well as ERASMUS and visiting students.

Research in the Department of German covers a wide range of subjects and disciplinary fields, taking place in six main areas: Literary Studies; Cultural Studies/Cultural History; German as a Foreign Language Studies; Intercultural Communication; Media Studies; and Identity. The German unit at UCC is mostly active in research fields that are internationally recognised as innovative (Cultural Studies, Cross-disciplinary Studies, Intercultural Communication). More traditional, philologically oriented studies within the wide field of German literature are also present (focus on single authors, periods; translation and scholarly editions). Another strong field of specialisation is Drama and Theatre Pedagogy.

RAI 1 - Selected published output

The quality review focused on five items selected by individual staff members. The majority of the work evaluated has been considered of good and very good quality; a small portion of work (4 items) has been assessed lower. Three items have been assessed as excellent. In light of the heavy teaching loads, and the differing career stages of research-active colleagues, this profile is to be commended.

The selected published output of the Department has been demonstrated to be of a good standard.

RAI 2 - Total published output

The total published output in the years 2008-2014 is consistent, including edited volumes, journal articles, book chapters, and conference proceedings. Overall the publications have been well placed at international and national levels. As for the typology, the preferred form seems to be edited volumes.

The Panel would recommend an ambitious approach to targeting high-impact journals going forward and to develop a strategy, linked to sabbatical leave, for producing monographs in leading outlets.

The total published output of the Department has been demonstrated to be of a good standard.

Overall, and as outlined in the recommendations for all departments (under section 6 below), the Panel would recommend that the Department develop a structured research strategy in conjunction with colleagues in the wider School. Being able to rely on clear strategy goals and on more specific guidelines would be beneficial for the individual researchers. The unit would also be able to acquire a more sharply outlined profile. It is to be noted also that, in terms of strategic leadership, the Department would greatly benefit from a Chair.

RAI 3 - Peer esteem

The Department of German provided a wide range of indicators of peer esteem, such as the significant number of invitations to give lectures and seminars in Ireland and abroad as well as to serve on academic committees and scientific boards. Some members of the staff have received research grants, have collaborated with international journals and have been appointed to chair professional associations. Taking into account the career stage of all the members, the overall level of peer esteem is highly impressive.

The peer esteem of the Department has been demonstrated to be of a very good standard.

RAI 4 - Research-related activity

The German unit is very active in giving lectures and seminars in Ireland and abroad, totalling over 100 active contributions at conferences and in institutions spread over three continents) and organising guest lectures at their home university (26 initiatives of this kind in the timeframe considered). A notable number (14) of international conferences have been organised by members of the Department and took place at UCC in the timeframe considered. The general impression is of unit with a definite high level of professional engagement.

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 - Postgraduate research education

The Department of German currently has five PhD students and three more currently on leave. This is a significant number of students in a context where recruitment to PhDs in the Humanities is generally challenging. It is also noteworthy that some former PhD students hold academic posts in the US, Japan and Ireland.

As part of their education, PhD students attend research skills courses and are strongly encouraged to publish. Their list of publications is highly impressive.

A praiseworthy initiative was the organisation of the first German Studies Graduate Conference in 2011. The initiative should be possibly repeated on a regular basis, thus establishing a UCC tradition of meeting and discussion exchange for German postgraduate students from all over Ireland and from abroad, thus creating favourable networking opportunities at national and international level.

A weak point of the PhD programme seems to be logistical, due to scarce room availability and a decrease in the library budget.

Overall, the number of postgraduate students of German is to be commended in light of the size of the Department, as is the postgraduate research culture.

The postgraduate research education of the Department has been demonstrated to be of a very good standard.

RAI 6 – Research income

The unit seems to succeed in being financially independent as far as performing its research activities, being able to obtain research funds, travel and publication grants, funds for locally organised conferences, books etc. The unit has put a considerable effort in order to raise these funds and also scholarships for PhD students. The overall success has been significant, as it cannot be expected from such a small Department to compete for more ambitious goals.

Nevertheless, it can be suggested to staff to evolve a deeper involvement in the research clusters being established in the School, which could give them opportunity to participate in large-scaled projects and resource competitions.

The research income of the Department has been demonstrated to be of a good standard.

Areas of good practice

- The engagement of staff in a wide range of research-related activities
- Impressive evidence of high peer esteem

Recommendations for future development

All relevant matters have already been raised in the previous section. The Department of German would benefit greatly in acquiring a more clearly outlined research profile. A tighter structured and more intertwined research environment could produce a more innovative research output and an overall higher quality level. A more definite research profile could also serve as a pole of cultural attraction for graduate students.

More so, it would be of great help to enhance the strong research potential of the Department to appoint a chair designated to organise the research and teaching activities of the entire staff, including the PhD students, as well as the pursuing of fund raising and grant applications.

Concluding statement

The Department of German consists of four strenuously active researchers. Their scientific output is overall conspicuous and of definitely good quality. Their efforts within the fields of research-related activity, postgraduate education and fund raising is remarkable, despite the financial crisis and the strenuous commitment being required at all levels of the institutional practice. This can be a very high burden for a small Department, more so for its younger staff members, who at the early stages of their careers should receive mentoring and be permitted to experience a gradual involvement in activities not specifically related to research or teaching. Its achievement in the time frame considered is all in all remarkable. Its potentiality of becoming an internationally recognised research pole is excellent.

The research activity of the Department demonstrates significance to the discipline and rigour to a good standard.

Panel M: Italian

Introduction

Compared to other Italian departments in Ireland and Britain, UCC's Italian unit can be defined as mid-size. The presence of four research-active permanent members of staff allows for a sufficient range of expertise capable of attracting both high-level undergraduate and postgraduate/post-doc students. The majority of research in the Department links to the modern period with some additional expertise in the medieval period and the eighteenth century. These overlapping interests allow for a good degree of collaboration, as shown by staff publication output.

Overall, the impression is of a very solid Department, dynamic and influential both within the community of Italian studies in Ireland and Britain and as a group of researchers aiming to disseminate their work amongst the wider community. Their Research Statement documents this in some detail and the Panel would agree with its final comment that the Department "punches above its weight", particularly so given that their Chair has remained vacant since 2003.

RAI 1 – Selected published output & RAI 2 – Total published output

The level of departmental research activity is very high, both quantitatively and qualitatively. More than 3/4 of the submitted output is in the 'very good' to 'excellent' band. Moreover, the overall output has a reassuringly short tail.

The Panel would entirely agree with one of the Remote Reviewer's observation that "[a] commendable aspect is that the Italian faculty shows strong common critical interests —and, in fact, have often published articles in the same venue or special issues/books, while also portraying a diversity of interests and field specialisation. The former allows for a cohesive approach to Italian literature and culture, the latter for a broad spectrum of pedagogical offering. These two aspects combined are probably a plus for attracting versatile graduate students."

The Panel would only add that, despite this positive picture, the lack of a Chair is a clear limitation in terms of the Department's potential as a prestigious research unit. There is no doubt that the leadership and strategic planning provided by a Chair would add a further level of strength, particularly in the field of leading major research projects organised and run by the Department.

Both the selected published output and the total published output of the Department have been demonstrated to be of a very good standard.

RAI 3 – Peer esteem

As regards peer esteem, all four members of the Department are involved in a number of activities and have taken up institutional responsibilities both within UCC and in the wider world of Italian Studies in Ireland, Britain and Italy. Italian at UCC is certainly regarded as

a centre of excellence in the field and all four members have been asked to act as external examiner, from undergraduate to PhD level, in universities across Europe and beyond. The perception of the Panel is that the Italian Department at UCC has substantially increased its profile as a teaching and research unit, probably starting from their organisation of the biennial conference of the Society of Italian Studies, in 2003. Since then there has been constant progress and improvement and particularly remarkable in recent years has been the capacity of the Department to project its activity through social media and events aimed at non-specialist audience. It is highly commendable that the Department should have managed this in the current financial circumstances and without the additional prestige provided by a Chair.

The peer esteem activity of the Department has been demonstrated to be of a very good standard.

RAI 4 - Research-related activity

This is an area in which great progress has been achieved, building on the recommendations of the previous RQR exercise. The Department is present both in the field of Italian studies and in events addressing the wider community with a range of activities which involve all members of staff. The Dante public lectures, launched in 2011, have been particularly successful. They are also an example of ways in which the Department can engage in areas of study which are not core to all staff's research interests but which are nonetheless part of their scholarly DNA as academics working in Italian studies. Finally, the Department's Facebook site is a good example of a stimulating and informative webpage which is followed and appreciated far and beyond its academic content.

The research-related activity of the Department has been demonstrated to be of an excellent standard.

RAI 5 - Postgraduate research education

This is another area in which great progress has been achieved. The number and quality of research students is outstanding, ranging between seven in 2008 and 10.5 in 2014, all funded in various forms by different institutions. This is highly commendable given the relatively small size of the Department. Furthermore, there is a solid monitoring system in place and the site visit confirmed the impression of a thriving research environment involving staff and students in a range of common

activities. Graduate students spoke enthusiastically of the monthly, day-long Writing Retreats organised by the Department. The Panel fully subscribes to the comment made by one of the Remote Reviewers: "The activity of the postgraduates and the range of interests of the current doctoral students show the breadth of the Italian faculty at UCC as well as the ability to attract a diverse group of students. Clearly the strong focus on thematic and cultural studies, joined with a robust disciplinary curriculum, work as a catalyzer for students interested in Italian culture in general, but in theoretical and methodological studies as well."

The postgraduate research education of the Department has been demonstrated to be of an excellent standard.

RAI 6 - Research income

The document submitted by the Italian Department, unlike other Departments, only contains an Excel document detailing the breakdown of funding achieved by each individual member of staff. This makes it difficult to compare the results across the whole School. There is also no narrative about how the Department organised, collaborated in, and planned for, the various sources of income. Beyond this, however, there is no doubt that the Department has been very successful, in fact more successful than any other unit within the School (with an overall amount in excess of €740,000), in raising funding for both research activities and postgraduate support.

The research income activity of the Department has been demonstrated to be of a very good standard.

Areas of good practice

Since the previous RQR review, the Department has made excellent progress in establishing its presence within the world of Italian studies in Ireland and Britain, as much as in the public sphere, locally, at Cork, and internationally in Italy. This is, on the one hand, the result of the dynamic scholarly activity by each member of staff. On the other, it benefitted from the Department's careful strategy in promoting and offering their expertise to the wider community. This has happened also at the level of graduate studies. The creation of the by now well-established Annual International Graduate Conference in Italian Studies has massively contributed to the profile of the Department as a prominent research-active hub in Italian studies.



Recommendations for future development

- **Library:** it is regretful that the budget should have been reduced by 60%, from €9,140 to €3,663. It is difficult to think that this has not had a detrimental impact on the capacity of the Department to maintain a good stock of primary and secondary works, particularly for the use of graduate students (as confirmed by their delegation during our visit). At the same time, it is odd to notice that the amount spent on serials has not decreased at all, to the point that in 2014/15 its cost is more than twice that of book orders. This is far out of line with normal library budgets. The Panel would suggest that at least 50% of the budget, whatever its level, should be earmarked for book orders. A reduction of the serials budget could perhaps be achieved through coordination with other Italian departments in Irish universities. At the same time, the College should seriously consider a return to levels of library budget which are consistent with a university aspiring to be a research institution of international excellence.
- **Research activity:** Given the level of overlap amongst the research interests of members of staff, the Department should perhaps try and plan an application for a major research project involving most members of staff and ideally producing the funding for postgraduate posts. Within this spirit, members of staff should also consider the creation of a Research Centre capable of acting as a catalyst and an externally perceived body around which to build their international reputation as a team of scholars.
- **Staffing levels:** The Department needs and deserves to be strengthened with the reinstatement of its Chair, which has been vacant since 2003. The current four members of staff have achieved all, in different areas, a prestigious international profile. However, the leadership and prestige of a Chair would add a vital element to the Department and allow it to increase even further both its international reputation and its capacity to generate external research funding. Ideally, the Department should be reinforced with a senior colleague whose research interests are on the one hand sufficiently compatible with the creation of internal lines of research collaboration and on the other capable of widening the overall expertise of the Department beyond the modern period.

The impact of secondments should be given full consideration and compensated for as appropriate. A reduction in staff numbers inevitably impacts on the capacity of remaining staff to free up the necessary time to produce high levels of research. A clear strategy at School level is vital, with clear aims and adequate provision of support.

Concluding statement

As already mentioned in the introductory remarks, the general impression is that of a very solid and active Department. The progress made since the previous RQR review is particularly commendable, especially so in the area of establishing the research profile of the Department on the map of Italian studies in English-speaking countries and beyond. The programme of specialist and non-specialist events organised by Italian at UCC in the last few years is outstanding and so is the level and quality of their postgraduates.

The overall cohesiveness and strength of the Department's research output is also reassuring and bodes well for the future. This is a group of scholars who have responded admirably to the challenges coming from the financial crisis and from the need for a more publicly engaged commitment of their research expertise.

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel M: Spanish, Portuguese and Latin American Studies

Introduction

The Department consists of five Category A staff, with one Professor, one Senior Lecturer, and three lecturers, including one early career researcher. For the purposes of this review, the research of one further member of staff (Digital Humanities and Screen Media) has been included. The Department has stabilised at 5 FTE, after a period of pressure on staffing, and the submission presents a strong case for a unit that has succeeded in creating a sustainable structure for research and research-led teaching. There is evidence that the Department has taken on recommendations from the last Research Quality Review, and has engaged with School and College initiatives to develop additional structures to support research.

The Department demonstrates commitment to disciplinary and inter- and cross-disciplinary initiatives, and the postgraduate research culture is to be commended.

RAI 1 - Selected published output

The Panel read outputs in the areas of Medieval and Golden Age, Modern and Contemporary Spanish literature, theatre, film, visual arts and translation, including in Catalan and Galician studies, Mexican and US Latino/a culture and in the emerging area of Southern Cone studies. The Panel noted the outputs of research-active retired staff and staff who have moved elsewhere. The outputs range predominantly from recognised internationally to demonstrating leading international standards, with a small percentage in the categories of recognised nationally. In the cases of an assessment of an output that falls below recognised work, the Panel noted the element of knowledge transfer and creativity, but felt the research component was not adequately expressed. Some attention needs to be paid to the explicit fulfilment of research criteria in edited collections, and in outputs that relate specifically to knowledge transfer and public engagement. The Department continues to produce research that is agenda-setting in its rigour and originality and in leading for future scholarship in the discipline.

The selected published output of the Department has been demonstrated to be of a good standard.

RAI 2 - Total published output

The Panel considered carefully the total published output of each Category A member of staff, considering extent, diversity and quality. In this area, the Department is performing consistently at the standard of internationally recognised levels of excellence, indicating that there is strength across the Department in sustained publication in a diverse range of publications. The Panel notes that the Department has taken on comments from the last RQR that staff should publish in a wider range of international outlets, and have actively and successfully targeted international outlets and the major peer-reviewed journals in their respective fields. In addition, there are a number of edited volumes that have arisen from the international conferences organised in the Department. It is to be noted in this respect that the strategy has had an impact on the publication profile of all members of staff.

The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

The Panel notes the continued excellence of the reputation of the Department in the scholarly community. There is ample evidence throughout the submission of energetic involvement in professional associations through wide range of national, UK and high-profile international roles. The overall score for peer esteem reflects the changed profile of the Department after a period of instability. However, it is clear from the evidence provided that there is capacity to reach and maintain the highest standards in this area. The profile evidences the leadership role played in the Irish academic community and the potential for sustained high-level engagement given the wide range of scholarly and professional roles undertaken by members of staff.

The peer esteem activity of the Department has been demonstrated to be of a good standard.

RAI 4 - Research-related activity

Research-related activities demonstrate excellence in terms of extent, diversity, ambition and scope. The Panel commends the Department for the sustained strength of its research culture, including a well-developed sense of how to disseminate research to a variety of audiences. The range of activities over the full period of assessment is impressive, with each research area being represented consistently through contribution to the active and diverse seminar series and to the organisation of international conferences. The research strategy is clearly working in this respect, with the different research 'hubs' operating both as discrete areas of focus and as overlapping research initiatives through which expertise and experience is shared. Conference activity is then being followed up with high-profile publication projects, some of which have the potential of making international impact. The range of speakers and collaborators that have taken part in events in Cork is indicative of the ambition of the Department to be recognised as a centre of excellence in the discipline. In this respect, the Panel notes the positive response by the University to the consolidation of the research centres, particularly the Centre for Galician Studies. The creation of the Centre for

Advanced Study in Languages and Cultures (CASILAC) in 2014 has provided productive opportunities for cross-disciplinary research and promises innovative ways of building on the work of the Department's research themes and centres.

The commitment to public engagement is evidenced in the collaborative events with non-academic partners, covering libraries, museums, galleries and other cultural institutions. There is patent success in working across the community, including engagement in outreach and community education, which is a model of good practice in this area. There is evidence that each individual member of staff has a commitment to communicating with multiple audiences, and, while some of these collaborations and partnerships might be in their infancy, there is a robust logic underpinning the activities, built on the strength of the research identity of the Department and the ways in which it is building clear pathways from research to impact. There is obviously scope to develop this further and the Department shows that they have built the infrastructure to do so.

The research-related activity of the Department has been demonstrated to be of an excellent standard.

RAI 5 - Postgraduate research education

This area of activity was awarded an 'excellent' in the last RQR, and the Panel notes that the Department has worked to maintain excellence of provision. Following a recommendation of the last RQR, a mentor for postgraduate research students was appointed, creating a strong reference point for support throughout their studies. The Department has engaged fully with the Graduate School and played a leading role in the reorganisation at School and College levels that is now creating the structures to ensure a high-quality experience that is built into University structures and not dependent on the individual.

All members of staff are involved in graduate supervision and training. The appointment of a second supervisor for each is positive, as is the access to guidance for all supervisors provided through local mentoring and Graduate School training. There is an impressive success rate in the applications for IRC funding, with other students being funded, for example, by the local authority, UCC SRF and foundation grants. The supervision arrangements are very strong, with high levels of meetings (fortnightly), and progression is carefully monitored. Students are given access to a set of core opportunities for exchange and research visits to other institutions. Support for attendance at conferences is provided by a travel fund and the use of self-generated income for bursaries and stipends. The strength of the culture is amply seen in the organisation of the postgraduate research conferences, some with resulting publications. The completion rate is very good, with most submitting within four years. The range of subjects covered by postgraduate students has greater breadth than at the time of the last RQR as a result of the changed composition of the Department, including the consolidation of its research centres.

The postgraduate research education of the Department has been demonstrated to be of an excellent standard.

RAI 6 – Research income

The Department has a strong culture of applying for grants that is shared by individual members of staff. The strength and reach of the research in the Department is well represented in the range of funding that members of academic staff and graduate students have won from a range of national, European and international foundations and funding bodies. The Panel notes the strategy of building applications for major research grants, where there has been some success in reaching the latter stages of selection. The improved structures of support at College and University levels are welcomed and the School has played an important part in embedding these structures. The appointment of a Research Office has had a positive impact resulting in the establishment of a strong framework for supporting bids through information gathering, pump priming and peer mentoring. The ambition to engage with Horizon 2020 is especially important in this respect, and the Department is to be commended for actively creating the means through which to build a confident bid.

The research income activity of the Department has been demonstrated to be of a very good standard.

Areas of good practice

- The postgraduate research culture, which is of international standard, has maintained and improved in levels of excellence, and the Department has clearly developed the ability to attract international students.
- Financial support for research activities has been managed very well through the inventive and judicious use of income generation and internal resources.
- The Department has been successful in maintaining sabbatical leave through an internal, cost-neutral model.
- Research activity is well managed through the two research centres (Mexican and Galician) and through research 'hubs' that offer very strong research focus points, and have strong potential for pathways to impact and public engagement. This also provides the means for working with colleagues across the School (through CASILAC) and engagement with the College's key priority areas for research.

- The mentoring of members of staff, especially Early Career Researchers is well defined and managed through clearly identified structures.
- The Department has created a culture in which there is an expectation that grant applications will be made, and there is a well-managed ambition to enter into the major competitions.

Recommendations for future developments

- In relation to the commitment to and success of knowledge exchange, public engagement and outreach activities, the Department is encouraged to monitor and define how these relate to research outputs, either in terms of research as the impetus for this type of engagement, or in terms of research arising from it.
- In PhD supervision, the Department should continue in the development of the culture for research supervision, mentoring members of staff new to supervision through co- and second supervision roles.
- Although the Department has made internal provision for postgraduate space, further commitment to providing this space at University level is recommended as a means of providing a key element of postgraduate study in the Arts and Humanities.
- The Department is encouraged to develop further strategies for successful major grant bids, building on strategies in place.
- The Department is encouraged to support further the development of the international profiles of all colleagues.

Concluding statement

This is a Department that is very well led in research. There is a confident and engaged research culture, founded on the full commitment of each member of staff. The very lively postgraduate research community plays a central role in the research community and is supported in creating international research initiatives. There have been exciting innovations in the areas of research carried out in the Department, all of which tackle some of the major global issues of our time, offering local and international engagement and impact as well as the promise of developing research excellence. The



Department has handled the difficulties in staffing and funding during this period with invention and dedication to research, and changes in structure and staffing being managed to enhance an excellent profile, which includes research-led teaching. Some work still has to be done in developing the research outputs and profile in some areas, and continued mentoring will be important in this area. Overall, this is a Department whose research environment is increasingly recognised internationally and which has an important and growing presence in Hispanism.

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel M: Commendations & Recommendations

Commendations

The Panel would wish to commend the following:

- Outstanding PG culture both in terms of numbers and staff/student engagement.
- Generation of internal resources to develop an innovative research culture.
- School-level commitment to ring-fencing seed-funding for research activity.
- Dynamic, emergent research clusters and established Centres.
- Excellent track record of knowledge exchange and public engagement activity.
- Good links with research users and local cultural landscape.
- Evidence of highly productive mentoring in some areas (to be built on as per recommendations).
- Evidence of a strong, inclusive culture of grant writing in some areas (to be built on as per recommendations).
- External connectedness – connections with other departments, disciplinary and interdisciplinary networks, subject associations, high-level lobbying through work of Irish Humanities Alliance (IHA).
- Clear evidence of departments working to establish themselves as centres of excellence in their fields (e.g. through wide range of events targeting multiple users, active use of social media, establishment of new associations).
- Commitment to collaborative and interdisciplinary working.
- Creation of CASiLaC (Centre for Advanced Studies in Languages and Cultures).

Recommendations

The Panel would make the following recommendations:

- Build on the new School structure to create a culture of/strategy for shared leadership, mentoring and collaboration, specifically in relation to developing the following:
 - a. A publications strategy based on targeting the top (journal) outlets and increasing the number of monographs (where this is recognised as a disciplinary gold standard) placed with in highly rated publishers
 - b. An income strategy ensuring there is the ambition and the practical support to transform existing track record into larger, collaborative grant applications
 - c. A cross-School mentoring scheme
 - d. A consistently applied cross-School appraisal scheme
 - e. A strategic approach to developing international profiles
- Enhance the existing good practice in knowledge exchange activities by articulating links to research and/or ensuring there is a strong research underpinning
- Clarify the links between practice (e.g., primarily translational activity in these departments) and research underpinnings
- Agree a strategic approach to library budget expenditure through close consultation with subject librarians
- Clarify sabbatical process for all staff
- Clarify promotions criteria for all staff in conjunction with the development of individual research strategies (to include income, publications, peer esteem markers)
- Consider development of a workload model at School level.

Panel M: Recommendations to the College/University

1. Develop additional mechanisms for involving Schools in college/institutional agenda setting
2. Review the role of College in terms of mandate for monitoring individual performance
3. Invest in leadership (training, promotion, appointments).

Panel N Report

Units in Panel N

History
History of Art
Classics
English

Panel N Members

Chair: **Professor Margaret Kelleher**,
University College Dublin
DVC for History: **Professor Alvin Jackson**,
University of Edinburgh
DVC for History of Art: **Dr Alexander Marr**,
University of Cambridge
DVC for Classics: **Professor Douglas Cairns**,
University of Edinburgh
DVC for English: **Professor Francis O’Gorman**,
University of Leeds

Scope and context of review

In accordance with RQR procedures, remote reviewer scoring was undertaken with respect to RAIs 1-3 prior to the Panel’s visit to UCC, 5-7 May, 2015. These scores were received and reviewed by the Panel’s four Disciplinary Vice-Chairs (DVCs), to whom research outputs were also available and who sampled them as needed. Submissions for RAI 4-6 were reviewed and provisionally scored by DVCs prior to the site visit, who tabled draft reports to fellow Panel members ahead of the site visit.

In the course of the three-day site visit, the Panel members met with members of the RQR Steering Committee (day 1), relevant Heads of College and members responsible for the RQR in the College (day 2), and University Senior Officers (day 2). A central aspect of the site visit was the Panel’s meetings with staff and postgraduate research students from the four units under review. All units co-operated fully with very good attendance by staff members and excellent participation by postgraduate students and postdoctoral researchers where present. The Panel appreciates the time allowed for its individual deliberations and discussion, which enabled it to reach consensus on overall Panel recommendations (see conclusions) and to develop detailed discipline-specific reports and final

scores. Principal findings and a preliminary summary of recommendations were communicated to members of staff charged with research leadership within the Schools at the exit presentation on the afternoon of day 3.

Panel N: History

RAI 1 – Selected published output and RAI 2 – Total published output

A key result emerging from the RQR is that 63 % of the selected outputs (RAI 1) and 64 % of the total published outputs (RAI 2) were assessed at either ‘very good’ or ‘excellent’, testifying to the School’s production of research of excellent or very good quality by international standards.

It also should be noted, however, that there is a ‘tail’ of less highly scored work. This is particularly striking for RAI 1, where 16 % of outputs were rated as ‘fair’ or ‘poor’ or not deemed to have any research content, and therefore not scored. These figures were lower for RAI 2 (14 % at ‘fair’ or lower) and RAI 3 (10 % at ‘fair’ or lower).

In general, the review suggests that the School as a whole was sustaining a very good level and quality of outputs during the census period, which were being recognised through a strong array of national and (in particular) international invitations or other ‘esteem indicators’. The evidence presented under these headings further demonstrates the existence of a high standard of professional attainment within the School and of strong leadership to the wider School community.

The selected published output and the total published output of the School have been demonstrated to be of a very good standard.

RAI 3 – Peer esteem

Equally striking were the external scores for peer esteem, which assessed 66% of peer esteem activity as ‘very good’ and ‘excellent’.

The peer esteem activity of the School has been demonstrated to be of a very good standard.

RAI 4 – Research-related activity

The School has marked strengths in at least two areas of research-related activity. Its track-record of hosting conferences is particularly noteworthy, especially in the broad field of Irish history. More significant, in terms of popular and international reach, is its various forms of web presence, including CELT and Multitext.

The School, College and University might usefully consider the ways in which they record ‘research-related activity’ such as media engagement or knowledge exchange or transfer activity. Some of this is recorded within individual colleagues’ IRIS profiles, but it seems at present to be somewhat hit-and-miss. The School documentation naturally emphasises web-related activity and conference organisation, but the individual profiles suggest that there are other arguments to make, and to document.

The combination of a vital web presence, conference hosting, together with good evidence of international engagement and activity in the IRIS profiles, results in a grade of ‘very good’ for RAI 4.

The research-related activity of the School has been demonstrated to be of very good standard.

RAI 5 – Postgraduate research education

The School is at present in a healthy position in relation to the size of its postgraduate community, with a total research student (PGR) numbers at around 50 (these being mostly doctoral students, though with a small number registered to complete MPhils). In rough terms, this equates to two doctoral students for every full-time member of staff, which in turn equates to the performance of several UK Russell Group institutions.

Several instances of good practice with the PGR community are worthy of note, including the dedication of one third of the non-pay budget of the School for tutorial scholarships and other forms of PGR professional development. Evidence has also been tendered of a robust assessment and mentoring regime with the Training Needs Analyses and also the Professional Development Plans in operation.

The PGRs understandably are focusing on Irish and indeed Munster themes, but there is a reasonable admixture of other, non-Irish, topics. The number of IRC postgraduate and postdoctoral fellowships won by Cork graduates seems strong. The School’s research students reported very favourably about their experience in History, and in particular about the high quality of supervision which they received.

On the debit side, there is no indication of the outlook for PGR recruitment and or of likely challenges (as there are in other Irish and British institutions) in this respect. While there is evidence of support for the PGR community, it is not clear that there is an active recruitment strategy. The idea of tutorial scholarships is deployed elsewhere in Ireland and beyond, and it would have been useful to have had more detail about the operation of these scholarships – about the trade-off between the teaching needs of the postgraduates (and the School) and the need to deliver a thesis accurately and on time - and about the extent to which these scholarships provide (or are intended to provide) ‘fee-waivers’.

The postgraduate research education of the School has been demonstrated to be of very good standard.

RAI 6 – Research income

The funding environment in Ireland has become constricted and unusually competitive in the years of the economic recession. Nevertheless, the Cork historians have sustained a good track-record of external grant capture, and appear to be maintaining a proportionate share of key awards, such as those offered by the IRCHSS and its successor, the Irish Research Council. Two notable successes have been the monies won through PRTL 4 for the Irish National Institute for Historical Research and through PRTL 5 for the Digital Arts and Humanities programme.

European funding is no less competitive and difficult, but it is noteworthy that the recent track-record of the School in terms of the European Research Council and other EU agencies is not strong. Some Marie Curie fellowship money is recorded; and evidence also emerged during the Panel’s visit that the historians had submitted several applications to HERA and were planning an application to Horizon 2020. But in general



the performance of the School over the census period might have been stronger in this area – at least in terms of the delivery of European funding.

This area of the School's activity was hard to score, because (in essence) a very strong national performance in the census period was counterbalanced by a weak international performance. Balancing these factors, the award of a low grade 'four' is appropriate, merited by the School's national successes, but also signalling the need for more work to improve research income from continental European funding agencies.

The research income activity of the School has been demonstrated to be of a very good standard.

Areas of good practice

There is much evidence of successful achievement and of good practice:

- The School of History has a very good research outputs profile, supported by favourable internal leave arrangements;
- The School has a very good culture of engagement with wider research communities, whether at local/regional, national, and international levels. The Panel visit coincided, for example, with (what was clearly) a very successful conference commemorating the centenary of the Lusitania sinking;
- The School invested early and effectively in a web presence;
- The School's intellectual and material support of its research students is strong;
- There is good evidence of the embedding of research skills in the undergraduate curriculum;
- The balance of support and academic staff is commendable (and is much better than in comparable leading Irish universities);
- The work of the College Research Support Officer was widely praised by the School and its value recognised by the Panel.

Recommendations for future development

We suggest that:

- The School examines and elucidates its postgraduate recruitment as well as its research strategies. It was clear that the Cork historians have some good ideas in these areas; but it was equally clear that these ideas could have been developed further as strategic documents.
- The School looks more closely at opportunities for engagement with European funding agencies, given that this appears a weak area of the external funding portfolio. There was some evidence of increased application activity in this area, but there was little or no delivery during the census period.
- The School looks at the possibility of research mentoring (aside from annual 'appraisal' type interviews). There is a track-record of excellent published work, but also a 'tail' of less highly scored material, and a mentoring system for all (early and mid-career staff) might well begin to address this. There was evidence of informal mentoring activity, but a more systematic approach might prove helpful, and could easily and speedily be put in place.
- The School (and indeed the wider College and University) looks at the ways in which it records

evidence under RAI 3 & RAI 4. Much good work is clearly being undertaken under this broad heading, but the capture and presentation of this appears at present somewhat erratic. This is particularly important since these areas together deliver 30 per cent of the total score for the unit. It would be desirable that the RQR should capture grant application activity as well as short-listing successes, since all of this (while stopping short of funding success) provides further indications of the health of the unit's research culture.

- Some details of research governance within the School remain unclear to the Panel and, in particular, those that relate to the relationships between the research committee, the research clusters, the research institutes, and research themes specified in the internal documentation. There may be a case for clarifying and/or simplifying these connections in order to systematise governance and perhaps further improve communication.

Concluding statement

There were areas where History's experience chimed with that of the other disciplines assessed by Panel N, and where recommendations are being made across the entire Panel. These areas include the lack of promotions opportunities in the humanities, and the difficulties that this may create in terms of offering career development and retention strategies. The upholding of library budgets, particularly in terms of monograph purchase, was an issue raised across the different disciplines of Panel N, including History.

In sum, however - the publications of the School were highly scored, and its wider research culture – material and intellectual support, 'esteem indicators', research 'impact' activity and income, the research student communities – generally matched this high level of success.

The School of History at Cork is successfully upholding a strong research culture while coping with high student numbers and limited financial resource.

The research activity of the School has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel N: History of Art

Introduction

History of Art is a small but autonomous Department within the School of History. It faces significant resourcing challenges at all levels (3.4 FTE staff; SSR mean 22.19 since RQR 2009; 33.5% reduction in non-pay budget since 2010). Despite these challenges, the Department produces high-quality research outputs across a range of fields and periods, and has managed to develop a positive and forward-looking research environment. Given FTE numbers, the Department has maintained a healthy PGR community and there is good evidence of outward-facing research activity in the form of public and international engagement. Given its small size, the Department is disadvantaged in the development of research environment. It cannot

count on the economy of scale that, in larger units, facilitates research development, whether individually or collectively. This is particularly acute in certain areas, such as the capacity of the Department's FTE staff to take sabbatical leave. There are some concerns that the Department is not represented effectively at senior levels in the University and that mid-career staff are not in receipt of effective mentoring. More generally, while individual researcher activity is strong, there are opportunities for a clearer development of the unit's research strategy. Further opportunities for enhancement are evident in relation to peer esteem; collaboration at the local, national, and international level; and research income, in the last of which the Department currently underperforms by international standards. Overall, however, the Department is to be commended for a very good performance in most areas.

The Department is generally operating at a high level, with few scores below 'very good' in RAI 1-3. A notable distinction is the achievement of 81% of RAI 1 outputs assessed as 'very good' or 'excellent'.

RAI 1 - Selected published output

The mean score for RAI 1 is 81% at 'very good' or 'excellent'. This rises to 89% when non-submitted outputs are discounted. Thus, there is strong evidence that the Department is producing work of very high quality by international standards, some of it world leading. There is hardly any tail and no outputs scored below 'good'. By any measure this is a highly impressive record, especially given the resourcing challenges noted above.

There is notable variety in publications, in terms of format and venue. A number of outputs have been published in internationally esteemed, high-visibility journals or with highly regarded university presses. Others have been published with presses of less robust reputations, or in publications of more local/national interest/reputation. The Department could perhaps raise its ambitions somewhat in this regard, developing a strategy of seeking to place research in the most competitive venues.

The selected published output for the Department has been demonstrated to be of very good standard.

RAI 2 - Total published output

Overall, the evaluation of this RAI is exceptionally strong: 89% of submissions are scored at 'very good' or 'excellent'. This is an impressive achievement and demonstrates a high level of productivity without sacrificing quality (as reflected in the scores for RAI 1). It is not always clear from the IRIS reports, however, which of the outputs listed have been subject to peer review. Similarly, length of publication has not been systematically recorded. A number of the outputs submitted for this RAI are short notes or handbook/dictionary entries. While these are doubtless worthwhile, their research contribution is somewhat equivocal. The Department may wish to consider a strategy of focusing more clearly on the production of peer-reviewed outputs that make an unambiguous contribution to international-level research.

The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

Scores for this RAI are generally high, although somewhat lower than for RAIs 1 and 2. 76% of submissions are scored 'very good' or 'excellent', 13% are scored 'good' and 'fair' respectively. Conference activity, both locally and internationally, is broadly healthy, although the exact nature (invited talk, conference organiser, etc.) is not always clear from the IRIS records. There is limited evidence of esteem in the form of externally awarded prizes, fellowships, and grants. This will be addressed further under RAI 6. Recent successful initiatives, such as the Enclave Review, have doubtless raised the Department's research profile in certain fields.

The peer esteem activity of the Department has been demonstrated to be of a very good standard.

RAI 4 - Research-related activity

Despite its limited resources, the Department has developed and sustained a decent range of research-related activities, notably in the forms of hosted conferences and curated exhibitions. The Department has sensibly capitalised on Cork's vibrant artistic community in these and public engagement activities. In particular, the establishment of the Eye and Mind forum has made the Department more visible as a locus for visual arts and media research across the University, attracting a number of distinguished international speakers. There is some evidence of external examining and peer reviewing for presses and journals. There remain opportunities for broader collaboration with colleagues across the university, not least the Glucksman and Crawford galleries. Currently, research-related activities seem somewhat ad hoc and dependent on individual researchers' interests. Greater efforts could perhaps be made to connect the activities of Department staff as well as considering ways of generating a greater variety/number of activities in collaboration with colleagues across the University.

The research-related activity of the Department has been demonstrated to be of a good standard.

RAI 5 - Postgraduate research education

Given its small size, PGR provision in the Department is remarkably strong. A good number of full-time PhD students work on an array of topics, in a programme fed largely by the Department's taught MA and undergraduate degrees. Uptake in the MA programme is variable but healthy, at between six and 12 students per annum. Quality of teaching and research expertise are clearly important factors in the Department's success, as is the University's support for the PGR programme in the form of studentships. The latter is to be both commended and encouraged, given the challenging HE funding situation in Ireland. The PGR community seems lively and ambitious, notably in relation to conferences organised and outputs produced. The Department is making efforts to recruit internationally, drawing on the University's North American contacts. In this regard,

thought could be given to identifying and marketing the particular strengths of the Department, perhaps in relation to clusters of expertise across the wider University.

The postgraduate research education of the Department has been demonstrated to be of a very good standard.

RAI 6 – External research income

This is by far the weakest aspect of the Department's submission. The Research Statement identifies modest non-exchequer income raised annually through the organisation of short courses and study tours, as well as small funds from a private donor. However, this is not research income per se. The Department has achieved some success in PGR funding, in the form of two IRC doctoral awards. Individual staff members have obtained some external funds to subvent publications. The only substantial external research income recorded is an Arts Council Award of ca. €24,000 to support the Enclave Review. Thus, it may be presumed that the research income-FTE ratio is low by international standards (full details of all research income are not provided in the Research Statement or IRIS records). There is a notable absence of major national or European funding, although it is recognised that funding of this type is extremely competitive. The Research Statement indicates that academic staff are encouraged to apply for external funding and attend relevant development events offered by the University. The on-site visit revealed that a number of applications for individual fellowships have been made but were not successful. With this in mind, University support in the form of mentoring and review of funding applications is desirable. The Department may wish to consider the development of large-scale, collaborative funding bids in addition to applications for individual fellowships. As in other aspects of its research strategy, collaboration with colleagues from other units may enhance the unit's prospects.

The research income activity of the Department has been demonstrated to be of a fair standard.

Areas of good practice

Key areas of good practice include:

- High quality of published outputs.
- Ambitious programme of research activity.
- Healthy PGR community.
- Capitalising on local artistic community.

Recommendations for future development

The quality and extent of the Department's research activity is to be applauded, given its limited resources. Yet one wonders if this is sustainable in the medium to long term. Unlike larger departments, History of Art cannot rely on an economy of scale to facilitate its research environment. In particular, difficulty in taking sabbatical leave is of serious concern, as is the absence of senior staff. There is currently limited evidence of research strategy, which may be hampering the development of environment and capacity for grant capture. In particular, opportunities for collaboration with other units are not being realised. Thus, the most urgent areas of development are:

1. Development of a clear research strategy. The Department should develop a strategic plan for research, taking into account possibilities for internal and external collaboration. While it is recognised that current national funding priorities are not sympathetic to the unit's research area, consideration should be given as to how the Department could capitalise on these and the University's research aims. 'Creative Education' and 'Digital Humanities' are possible areas that could be explored. In particular, developing a strategy for large-scale, collaborative research that may attract external funding should be a priority.
2. Collaboration within the University. This is perhaps the most important area for future development and has three aspects:
 - (i) Collaboration with colleagues across the university.
 - (ii) Collaboration with the Glucksman and Crawford Galleries.
 - (iii) Fuller integration with the School of History.



Item (i) should be developed with a view to the formation of research clusters that might lead to the generation of large-scale funding bids. While there is some evidence of activity in relation to item (ii) and, while it is recognised that this sort of activity often depends on inter-personal relations, the research potential of local galleries is not currently being realised. In particular, further efforts should be made to develop research collaborations with the Glucksman gallery. It may be noted that fuller collaboration with these institutions was a recommendation of QPC in 2006.

Item (iii) offers the most significant potential for the Department. While it is recognised that the College's new School structure is in its infancy, the Department has a remarkable opportunity to integrate more fully with the School of History. This may be achieved without the loss of History of Art's distinctive disciplinary identity, which should be acknowledged and retained. Better integration, particularly in terms of management and course offerings, would ameliorate considerably current difficulties, especially in relation to sabbatical leave. Better integration would support also the enhancement of research environment, especially in relation to grant capture, and potential for collaboration, although it is recognised that natural research partners for Department members may be located in other units (e.g. Philosophy, Modern Languages). Closer collaboration between History, History of Art, and the Department of Classics would offer exciting potential for powerful research development. There are many natural affinities between these units, not least, in the case of Classics, in 'material culture' (identified as an area for future development and hiring).

3. Generating external research income. It is vital that the Department develop a strategy for generating external research income, especially at the European level. The University can help in several ways: through peer-to-peer mentoring and sharing of applications, strategic advice from senior administrators, and seed-corn funding. Items 1 and 2, above, will greatly augment the Department's potential for grant capture.

4. Senior staffing. The Department currently lacks

senior staff, which may have an impact on research leadership, as well as representation at College and University level. This absence is particularly notable given the University's failure to replace the Chair who left in 2006. In the 2006 Quality Review follow-up report, replacement of this post was identified as a priority and had been authorised by the University. The current situation may be addressed in two ways: either through internal promotion (an issue raised in the Department's Research Statement) or recruitment of new senior staff (although it is recognised this is not straightforward). The University may wish to consider opportunities for shared posts in History of Art and History, for example in the field of visual and/or material culture.

5. Research resourcing. While research resourcing may be enhanced by several of the items identified above, additional support from the University is necessary if the Department is to continue producing world-leading research. Given the nature of the subject, access to funds for travel to galleries, libraries, and archives is of paramount importance. Similarly, recent cuts to the Library budget render research advancement more challenging. In particular, funds for specialist journals are urgently required.

Concluding statement

Given its small size and resourcing challenges, the Department is punching above its weight. The University has an excellent research resource in the Department's FTE researchers, who should be given every support. Additional resourcing, strategic guidance, and the encouragement of collaboration with other units will fully unlock the enormous potential of the Department and support its continuing production of world-leading research outputs.

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.



Panel N: Classics

Introduction

Irish universities in general, and the research community in particular, have been through some very trying times since 2008. The Department of Classics at Cork, however, seems to have suffered more than most. At the beginning of the census period there were six staff on full-time (five on open-ended) research-active contracts. That number has now been reduced to one. This fact in itself makes the development and enhancement of a genuine research environment impossible; and it makes the Department's brave and commendable efforts in that direction almost impossible to evaluate. The research output of the one remaining research-active member of staff has been – by any standards – impressive. Though the University in general has undergone restructuring in the past decade, Classics has, until recently, not been integrated into the new structures. A home has now been found for the unit in the School of the Human Environment; its future development will depend on successful exploitation of this move in academic terms, and especially in terms of research strategy and synergies with colleagues in cognate disciplines. One consequence of the Department's anomalous status in recent years has been that the research careers of its staff, and latterly of the sole remaining member of staff, appear not to have been managed at all. In these circumstances, the unit's success in maintaining a sustained programme of high-quality research publication is highly commendable.

RAI 1 – Selected published output

Publications were submitted by both Category A and Category C staff. Discrepancies in remote reviewers' scores were limited, minor, and largely self-cancelling. In reconciling minor discrepancies, the DVC was guided by the fit between score awarded and accompanying commentary, together with some sampling of the submitted items. The review identified work of very good quality throughout the submission, and even some work of leading international quality. No item submitted was regarded as less than good in terms of its originality, significance, and rigour. Whether one amalgamates scores for Category A and Category C staff, or includes Category A alone, the overall assessment for RAI 1 is 'very good'.

The selected published output of the Department has been demonstrated to be of a very good standard.

RAI 2 – Total published output

Category A staff have been extremely prolific in the period of review, especially in terms of articles in peer-reviewed journals. Many of these enjoy a very high international profile. The range of periods and topics covered is very impressive: from the late Roman Republic to mediaeval Ireland and from Ireland to Constantinople. In extent, diversity, and quality, total published output merits an assessment of 'very good'.

The total published output of the Department has been demonstrated to be of a very good standard.

RAI 3 – Peer esteem

Category A staff have accepted a number of invitations to address academic and wider audiences, to review for international peer-reviewed journals, and to referee items submitted for publication in article or monograph form. This level of activity equates to a good level of attainment in this category, and thus an assessment of 'good'.

The peer esteem of the Department has been demonstrated to be of a good standard.

RAI 4 – Research-related activity

Within its now severely constrained resources the Department of Classics has succeeded in maintaining a limited programme of visiting speakers (around three per annum). It retains its links with the local branch of the Classical Association of Ireland. The unit made a substantial contribution to the discipline by editing the journal *Classics Ireland* (until 2009). The well-known and highly respected Summer School in Greek and Latin provides a valuable service to young researchers from a variety of jurisdictions. In terms of conferences, colloquia, and the like, performance has clearly suffered during the period of review and in the very negative environment in which the unit has had to operate. Having staged a successful and memorable Celtic Conference in Classics in 2008 (from which several high-quality edited volumes have now been published), the Department has since organised only a single conference Panel (in 2010). Library budgets in Classics have been slashed. Though the circumstances which have determined this picture are beyond the unit's control, in extent, diversity, and quality the unit's activities under this criterion can only be assessed as 'fair'.

The research-related activity of the Department has been demonstrated to be of a fair standard.

RAI 5 – Postgraduate research education

Many excellent Classics departments in the British Isles struggle to attract PhD students. Contemporary international norms, both in terms of funding and in terms of supervisory regimes, make it difficult for small departments to compete with large. But the Department of Classics at Cork has had even more difficult conditions to cope with than these. In these circumstances, then, the unit's record (two PhD completions, one in 2010 and one in 2014, two further PGR degrees (at MPhil level), and seven (presumably taught) MA completions) seems rather creditable. Funding was secured for two PhD projects, even if only one of these was completed. A recent PhD graduate has already published two monographs and a number of papers. The sole remaining degree programme open to PGT students in Classics is unsatisfactory in requiring generic skills training rather than the intensive language skills acquisition which is essential for intending PhD students in the discipline; a new suite of postgraduate qualifications in Classics is, however, under development, with the support of the unit's new Head of School. The proposed postgraduate diploma in ancient languages (to include also Old Irish and Old English) is to be commended. The presence of only one research-active member of staff since 2011 has, in the past few years, made recruitment of research

students in Classics virtually impossible; it is much to be hoped that an increase in staffing will once again allow PGR recruitment and satisfactory supervision arrangements.

This review, however, must focus on the current state of the Department, rather than its future prospects. An assessment of 'fair' is awarded in terms of the unit's performance as measured by international disciplinary norms.

The postgraduate research education of the Department has been demonstrated to be of a fair standard.

RAI 6 - Research income

The unit has no research income for the period under review. Applications prior to 2011 were unsuccessful; since 2011 applications have been impossible. The Panel is asked to evaluate 'against the criteria of funding levels based on disciplinary norms for the specific unit and cognate disciplines and cognisant of the funding available to researchers in Ireland'. A zero return clearly compares very badly in international terms. But the Irish context is one of constraints that have been much more severe than in most other EU jurisdictions. There do appear to be possibilities for grant capture that have gone unappreciated; but the sharp and sudden decline in staff numbers in Classics at UCC clearly makes a sustained programme of application – especially for schemes that fund research leave – virtually impossible. That said, the score under this heading is 1. One might point out, however, that the breakdown of results in the recent UK REF exercise clearly demonstrates that high performance in terms of the quality of research outputs is not by any means necessarily underpinned by success in obtaining external research funding.

The research income of the Department has been demonstrated to be of a poor standard.

Areas of good practice

Category A staff must be commended not only for heroic efforts in sustaining a Classics presence at UCC, but also for continuing to publish so prolifically at a high scholarly level. There is much to commend in general in the way that Classics research (at staff and PhD level) has survived the sharp decline in staff numbers and the lack of investment in its future. But it would be hard to recommend such tenacity, admirable though it is, as an aspect of good practice to be emulated elsewhere – one would hope that there would be few, if any places, where it should even prove necessary.

Recommendations for future development

Classics at UCC has now been located in the School of the Human Environment. This gives it an administrative and professional context. This is especially positive given the pressing need to reinstate adequate mechanisms for research mentoring, not only of early-career, but also of established staff, and to ensure that a clear, consistent, and explicit research strategy is identified at all levels, from individual to institutional. A 2014 review, commissioned by the Head of the unit's new School,

recommended the immediate appointment of two new lecturers; one of these appointments is now in progress, with the public advertisement of a new post in Latin Literature. This Panel recommends that the second appointment, in Roman Art and/or Material Culture, be made as soon as possible. But even if the 2014 recommendation in favour of two new appointments is implemented in full, this will still be a very small unit in international terms. It is therefore essential that appointments be made in areas in which the research expertise of the appointees will support the development of a focused research cluster. The expertise of incoming staff must be mutually complementary, as well as complementing that of the existing Category A staff member.

Once the unit begins its process of regeneration it will be essential for its staff to form research alliances and seek synergies with members of other academic units (e.g. in the histories, in history of art, in literary studies, languages, and so on), building (for example) on existing arrangements such as that with the Centre for Neo-Latin Studies and on the Department's good relations with individual colleagues in other disciplines. New and existing colleagues in Classics should be encouraged to develop a collaborative research focus with researchers in cognate disciplines, with a view to the development of applications to funding bodies beyond Ireland and to attracting PhD students in the areas in which Classics intersects with other disciplines. The unit is pessimistic with regard to the prospect of European funding, probably unduly so. There is much that could be done by including Classics colleagues in collaborative projects, either with colleagues in other disciplines at UCC or with international partners. As an example, several UK schemes – such as Leverhulme International Research Networks, AHRC network grants, RSE international network grants – facilitate collaboration across national boundaries provided the lead applicant is UK- (or Scotland-, in the case of the RSE) based. The EU HERA scheme, ERC synergy grants, and so on allow the lead applicant to be in any EU/EEA nation.

There are opportunities for teaching and research collaboration between Classics and the members of its new School. The new module on the Romans in Ireland, provided by Classics and Archaeology, testifies to a commendable willingness to capitalise on these links. Beyond the School, the natural partners of a small Classics unit – focusing, at least for the foreseeable future, on the (late) Roman world – are presumably to be found among the University's community of historians, and more generally in mediaeval studies, broadly defined – an area in which the College has particular strengths. The recommended appointment in Roman visual and material culture will create opportunities not only for research and teaching collaboration with History of Art, but also will contribute to the solution of a pressing problem in terms of providing adequate cover for research leave in both Classics and History of Art. It is to be hoped that these desirable outcomes can be achieved in the context of the current School structures. Progress in that direction should be kept under review, especially with a view to ensuring that the potential of new appointments in Classics can be fully realised and that incoming Category A researchers in Classics are fully supported and integrated into the wider research culture of the institution.

A major desideratum for Classics is that adequate arrangements for sabbatical leave are rapidly put in place, both for hard-pressed existing Category A staff and for those who will join the Department in the coming years.

Concluding statement

Performance in areas RAI 4, 5, and 6 has been undermined by the institutional context in which the unit has been operating. It is no surprise at all that scores under these criteria are low. Research strategy, management, support, and mentoring for Category A staff appear to have been non-existent during the period of the review. A single research-active member of staff is in no position to take research leave, submit major funding applications, or attract PhD students. At the heart of the unit's submission, however, are selected research outputs and a substantial body of total published output that testify to the energy and resilience of internationally recognised Category A staff. As the unit begins to grow again, it is to be hoped that all Category A staff are afforded the time, support, and institutional/disciplinary context to build on what has gone before and develop an explicit strategy for expanding the unit's research ambitions and achievements in line with established international norms. In the circumstances, the overall assessment of 'good' which emerges once the various elements of the unit's profile are aggregated both acknowledges how much has been achieved in very trying circumstances and suggests that, though much is to be done, the potential is there for substantial enhancement of the unit's research performance, given the right institutional context.

The research activity of the Department demonstrates significance to the discipline and rigour to a good standard.

Panel N: English

Introduction

There is internationally excellent research evident in this School. External reviewers confirmed that 52% of outputs (RAI 1) submitted were rated at 'very good' or 'excellent' (with 16% rated at 'excellent' in RAI 2), the top end of the profile was identical with 52% of work judged at 'very good' or 'excellent' but with an increased 26% assessed as 'excellent'.

The documentation submitted by the School describing research culture, strategy, staffing, and public engagement activity is of a high quality. PGR experience is excellent and overall research-related activity is also excellent in relation to the opportunities locally, nationally, and beyond. In a challenging situation of high SSRs, a promotions freeze/restriction, and with reduced opportunities to align teaching and research, important scholarly activity is being undertaken across the disciplinary spectrum of the School and across historical periods of specifically literary study. Initiatives in creative engagement, as well as in the advanced level study of Film and in Digital Humanities, are suggestive of further vibrancy. The record of external funding awards (growing during the census period) is very good. There are issues for development, as evidenced by the submissions, and for the enhancement of activities currently being undertaken.

RAI 1 - Selected published output

1. There is some extremely strong work in this submission. At the top end, the research is at as high a level as anywhere in the academy in the discipline(s). The research is, more generally, notable for its range both



in terms of historical period (literary study) and mode of publication, including some open access models as well as established disciplinary gold standard formats, including world-leading peer review journals and monographs from major university presses.

2. The following are factors that would appear to have limited the performance of the unit in this area:
 - a. Some shortfall in numbers of items submitted;
 - b. A lack of clarity about how to establish the research content of creative work in relation to the RQR criteria;
 - c. The admission of critical material in RAI 1 that is not research or has very low research content;
 - d. Relatively fewer peer-reviewed essays (not least as distinct from book chapters or contributions to special editions); these remain a gold standard for quality in the discipline(s);
 - e. Some double counting (e.g., submission of edited collections as one output and an essay included in the collection as a second);
 - f. It is notable that post-doctoral research was not submitted.

Note that, while the top end of outputs in RAI 1 scored very highly (statistics in the Introduction above), 12% of outputs submitted were judged at either 'fair' or 'poor'.

The selected published output of the School has been demonstrated to be of a very good standard.

RAI 2 - Total published output

RAI 2 shows some gaps but there is also wide range and significance. Comments about the profile of publications (prestige and visibility) above apply in some cases here too and the prioritisation of more ambitious research outputs is advisable to ensure appropriate focus of energies. As noted, 52% of work was judged to be very good or excellent (26% excellent), which is very good, and no work was assessed as 'poor' (13% at fair).

The total published output of the School has been demonstrated to be of a very good standard.

RAI 3 - Peer esteem

RAI 3 includes high level indicators as well as lower rated activity. 41% of the scores awarded here were

considered to be 'good', though with 31% at the highest level of 'excellent'. Note that peer esteem should ideally be calibrated against the 'academic age' profile of a Department and its ratio of ECR, mid-career, and established field leaders. It is worth noting the relatively high number of recent entries to the profession in English studies at UCC (four out of five appointments in the census period) and the still unfilled established chair of Medieval and Renaissance Studies. Also notable is the loss of three professorial members of staff during the census period. Naturally, this has a consequence on peer esteem indicators that are not calibrated to 'academic age'.

The peer esteem of the School has been demonstrated to be of a good standard.

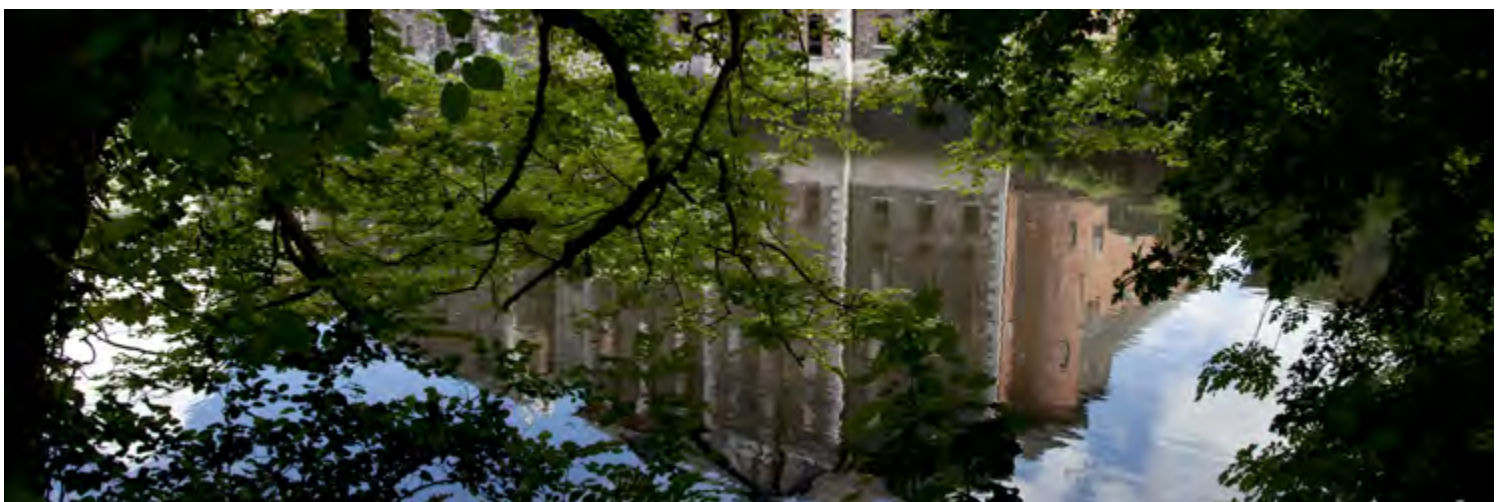
RAI 4 - Research-related activity

There is an excellent range of conferences on different subjects (Medieval to modern where literary study is concerned) with some very significant publications as a result. Exciting and productive links have been made with local and national cultural institutions, taking advantage not least of film and literary activity in the city and region that is of international significance. Investment in artists in residence (e.g., poets and Film Artist in Residence) and activity in Film and Literature festivals is notable, vibrant, and suggestive of excellent leadership. (Note that teaching activity also benefits from this research-related activity.) DUETS and the visibility of UCC's literary/media creativity is excellent.

The research-related activity of the School has been demonstrated to be of an excellent standard.

RAI 5 - Postgraduate research education

The number and range of students, and the diverse topics being studied at UCC is impressive. Medieval studies continues to attract students, which is encouraging for the overall diversity and historical range of the discipline and is a traditional strength of UCC. The annual PGR conference is admirable and well supported by an online presence. The list of publications from PGR students is very impressive (including a major monograph from a university press and articles placed in established high-profile peer-reviewed journals). The



PGR community is excellently prepared for academic professions and for others through skills training and professionalisation activity; supervision support is appreciated and excellent. The PhD students themselves described a culture of academic rigour, as well as support for both academic work and skills development. The ratio of academic FTE to PGR is very good in comparison with the sector. Students in Digital Arts and Humanities have admirable flexibility about the balance of dissertation v thesis in their final submission and this is supported institutionally. The university-level credit system for PhDs allows excellent flexibility for different kinds of research and is working well in the School with diverse opportunities being taken (including teaching, the development of language skills, digital editing, etc.). This is appreciated by the PGR cohort.

The postgraduate research education of the School has been demonstrated to be of an excellent standard.

RAI 6 – Research income

Funded internationally important work is being undertaken, resulting in, or to result in, major publications. Research funding is sustained and significant, and it is particularly impressive to see the Marie Curie successes over the census period as well as significant success with IRCHSS (now IRC), e.g., Christ on the Cross, as well as two Fulbright gains. It is very good to see a wide spread of departmental members involved in grant activity. A major EU award (e.g., HERA) would enhance this area of achievement and national/international invisibility.

The research income activity of the School has been demonstrated to be of a very good standard.

Areas of good practice

Areas of excellence have been noted above. In addition, there is commendable use of the UCC Special Collections in research and admirable fund-raising efforts for the Library's one-off purchases (The Great Book of Ireland). The submitted documentation is very good—concise, unrepentive, concrete, and elegantly expressed. Research-related activity is of an excellent quality with exciting connections to the Cork/Irish cultural sector and, indeed, culinary sector. There is commendable energy in developing PGR and post-doctoral activity and admirable collegiality and School leadership. The mutual support in relation to research leave periods is also to be commended.

Recommendations for future development

School level

1. Develop a more structured and supportive research 'governance' within the School to maximise opportunities, support, planning, and coherence. This would include a clearer shared plan for the development of all School initiatives that affect research;
2. Develop a programme of supportive internal mentoring (minimally annual research meetings but also a sequence of 'mile-stones' to evaluate development and, not least, the School's progress towards the next RQR). Mentoring will enhance career development for

ECRs and mid-career and further assist in increasing the number of grant applications;

3. Develop internal structures further to increase ambition in the nature of outputs and where they are placed;
4. Contribute to the development of criteria for the assessment of the research content of creative work;
5. As per comments under outputs, consider an enhanced internal reading process for selection of outputs for the next RQR;
6. Refresh the relationship between teaching and research (in particular where the UG curriculum determines research strategy);
7. Consider further development of high-level presence in UCC senior committees/management to help in the representation of arts and humanities research in UCC's mission and in the public articulation of that mission.

The implementation of many of these recommendations will have implications, in turn, for College/University level and as such have been incorporated into the Panel's overall recommendations below. Areas of special relevance for the School of English include consideration, as a matter of priority, of the promotions system to reward and motivate academic faculty; co-ordination of research planning from School to College to University to increase ownership at all levels; development of clear and shared plans for the maintenance of facilities (recognising the financial constraints); and the relation of RQR to other internal evaluation procedures, governance structures and College/University strategic planning.

Concluding statement

This is a School with excellence in many areas of its activity, undertaken in the context of significant resourcing challenges. It is particularly good at the top end of its outputs, in research-related activity, and in PGR education. Grant capture is very good over the census period. There is further potential for enhancement and development that could be unlocked through shared and collegial planning. This is significant campus activity that has national and international reach.

The research activity of the School has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel N: Overall comments

In conclusion, we wish to commend University College Cork for implementing and resourcing this important review process. Looking forward to a possible future iteration of this process, we would identify some aspects of the process for improvement, including (a) greater oversight within Schools of the inputs submitted to ensure that all submitted items are peer-reviewed and to avoid zero or incomplete submission; (b) greater consistency of practice within and across Panels with respect to the nomination of remote reviewers; (c) a more robust system (beyond the operations of current IRIS) for the collection of data relevant to the RQR process; and (d) attention to the variety of outputs which can characterise humanities research in areas such as creative writing or art history.

Overall, we welcome the opportunity that the process has provided to review Humanities disciplines as central partners in the teaching mission, research activities and national/international profile of University College Cork. We recognise the large amount of work that this review has required from University staff and officers and the RQR steering committee, and we are especially grateful to the Quality Promotion Unit and its staff members for their assistance throughout the review process.

Panel N: Commendations

Before moving to recommendations, the Panel would like to underline various commendations. In the course of this review process we have encountered a high-performing research community and pay tribute to the achievement of this performance in the light of large teaching demands and the constraints of cutbacks and scarce resources. We have reviewed outputs of high quality, range, and significance and some excellent research-related activities with innovative regional, national, and international dimensions. We also commend good practice in postgraduate education and welcome the flexibility displayed through the enabling of individually orientated student pathways within a structured PhD programme. We were impressed by the role of the College of Arts, Celtic Studies and Social Sciences in developing its Strategic Plan and RQR briefing documents and we recognise the vital significance of College services in funding research activities and in supporting grant activity. Relatedly, we welcome plans for expanded seed-funding initiatives at College level. The involvement of members of the College and University community in national initiatives and humanities advocacy is especially commendable and has the potential to influence national and international policy for the humanities. The College/University's proposed development of a Creative Campus is to be welcomed as an important move towards inclusive multidisciplinary research, more especially in the plans to include a physical Creative Hub (see recommendations below).

Panel N: Recommendations to the University

1. To resource, through concrete supports and examples of good practice, the development of a Research Strategy at School and discipline level.
2. To encourage and incentivise the involvement of School members in broader University initiatives.
3. We recommend, as a matter of urgency, that the University revisit the operation of its promotion schemes in order to ensure that it protects investment in first-class researchers and ensures researchers' proper career development.
4. To develop mentoring processes and support for early-career researchers.
5. To introduce mentoring at all levels (including mid-career) and fostering of research leadership within Schools.

6. To deploy University resources to achieve equity in access to the current sabbatical system and to ensure that this vital resource is available to all.
7. To restore and maintain resources for subject-specific research within library budgets.
8. To promote greater dissemination among the postgraduate population of the options and benefits available within the structured PhD programme and to attend to the design and weighting of modules more fully to address diverse disciplinary needs.
9. To foster ambition to publish and disseminate work in more international and high-visibility fora.
10. To implement more robust mechanisms for the collection of University-wide research data, most especially with respect to peer esteem indicators.
11. To implement strong and sustainable mechanisms for the design and communication of research strategy between University, College, Schools, and staff members to ensure collective ownership of such strategy.
12. To create research clusters to foster effective multidisciplinary, interdisciplinary, and transdisciplinary initiatives beyond unidisciplinary activities.
13. To monitor and ensure the sustainability of existing interdisciplinary initiatives where appropriate.
14. With reference to specific collaborations, the Panel welcomes the conversations between History and History of Art that have emerged since the establishment of the new School structure. Given the potential for research development that may arise from deeper collaboration, the Panel encourages the continuation of these conversations.
15. To consider the desirability of a Humanities Institute to foster collaborative research in a range of disciplines (not only digitally-related research). Such an institute might provide a structure to ensure that research initiatives (e.g., the Creative Hub) reflect and draw fully from the research strategies of its many component Schools and units. The Panel sees such an Institute as a key means of realising the growing national and international potential for securing philanthropic funding in the humanities.
16. To ensure greater status and visibility for the humanities in university priorities and in the University's public articulation of those priorities at institutional, national, and international levels.

Panel O Report

Units in Panel O

Department of Music

Department of Drama and Theatre Studies

Panel O members

Chair: **Professor Nadine Holdsworth**,
University of Warwick

DVC for Music: **Professor Jan Smaczny**,
Queen's University Belfast

DVC for Drama & Theatre Studies:

Dr Michael McKinnie,
Queen Mary University of London

Introduction

The Panel has been engaged as part of an institutional Research Quality Review (RQR) and has had a wide brief to look at individual research items, total published outputs for individual researchers during the period 2008-14, research esteem, research-related activities, postgraduate research education and research income. The Panel appreciate the input from UCC staff in this review and would especially like to thank staff members in the respective subject areas for their participation in this process and their willingness to engage in frank discussion about their overall research capability, capacity – departmental and institutional - and ambitions for future development. The Panel appreciates that the University and the subject areas have been working in a period of financial insecurity and constraint since the last RQR and that this has put significant pressure on the resource available to support research activity and staff development. The Panel also recognises that the Department of Drama and Theatre Studies, in particular, has suffered from a period of upheaval in staffing due to a variety of factors that has had a major impact on the research capacity of remaining staff. Despite these environmental difficulties the Panel found significant potential for the development of existing research strengths that will enable the Departments to continue to foster distinctive research profiles in their disciplines regionally, nationally and internationally. There is also promising potential to build on emergent and established collaborations within the University, with researchers

beyond UCC and with the local and national cultural sector and stakeholders. The Panel hopes that this RQR will encourage the continuing development of the best possible environment - physical, intellectual and in terms of support structures - in which research in music, drama and theatre can reach its full potential.

This Research Quality Review (RQR) has been informed by the following:

- Prior to the site visit the Panel submitted a document outlining disciplinary norms and operational guidelines to be applied to the review of Music and Drama and Theatre Studies. As indicated by the operational guidelines, the Panel did not use metrics to evaluate the research activity contained within submissions but, instead, based its evaluation of research activities on external reviewers' assessments and the panellists' own judgment. The Panel also applied University provisions for output reductions where warranted.
- The Panel studied UCC Guidelines for the RQR Evaluation Procedures, the report from the last RQR conducted in 2009 and the research statements and additional documentation supplied by the two departments and the College of Arts, Celtic Studies and Social Sciences.
- Both prior to arrival, and on site, the members of the Panel scrutinised, discussed and evaluated research outputs and IRIS profiles submitted for review.
- A site visit was conducted over three days from 5-7 May 2015 and included visits to departmental facilities and a discussion with staff and postgraduate students. In addition, meetings were held with senior UCC staff to facilitate a broader understanding of the institution's organisational structures and approach to research.

An exit presentation of the principal findings of the Panel was made to staff on Thursday 7 May 2015.

All Panel members have contributed to the authorship of this review and take responsibility for the comments and scores awarded. Whilst the Panel has presented individual reports for the subject areas, there are common findings for UCC's senior management and the College (CACSSS) to address.

Panel O: Music

Introduction

The Department of Music at UCC is one of the largest and most diverse in Ireland. The range of expertise of its staff is impressive, but coalesces in a number of areas, notably musicology, ethnomusicology, composition (contemporary, minimalist, computer music, jazz), film studies, gender and music, post-colonial music and performance. While extensive, these research divisions inevitably seem rather crude on paper since there is considerable overlap between the disciplines indicated by the broader definitions. Evident strengths in terms of research output relate primarily to ethnomusicology, musicology, inter-culturalism and film studies. It is evident that the Department has experienced considerable change (many changes in personnel; the creation of the new School of Music and Theatre in 2011, etc.) in recent years. This structural change needs to be managed with a sense of direction and with a clear understanding of responsibilities in order to build on strengths. This kind of evolution is characteristic of a number of cognate units in Ireland and the UK. While it might seem desirable to state that there is a clear balance of excellence in research activities, this would be an aspiration beyond the capacity of most departments. What seems evident is a healthy balance between the Department's self-image and its intentions where research is concerned.

Overall evaluation

The aspirations of the Department as set out in the Research Statement are certainly credible in the context of activity as presently constituted. The desire to foster single-disciplinary enquiry alongside cross-disciplinary research is particularly creditable in a contemporary environment that appears to seek to privilege the latter over the former. The linking of Music and Theatre in a new School offers opportunity for developing aspects of performance research, but this needs to be handled with care in order to preserve the evident research strengths and identities in both Departments.

On paper, technical and administrative support at departmental level seems good. Both are crucial in a music Department that a) has major technical requirements (beyond the effective working of staff equipment, although this is important) and b) has to organise performance events and music lessons alongside the usual activities of an academic Department. While the staffing situation in terms of various kinds of leave seems fairly complex, it is not out of line with units of a similar size and, in general, does not seem to have harmed research output unduly. The decision not to include staff recently departed to other institutions seems sensible since the picture is one of development (in the case of Dr Morris, for example, now Professor and Head of Department at NUI Maynooth, the significance of his research is well known).

The stated aim to provide one research day per week during the teaching year is healthy and consonant with other institutions. However, teaching and administrative loads need to be monitored with rigour. Postgraduate teaching (often very demanding MA work - and there appear to be a large number of MA programmes run by the Department) as part of a 'normal' load can often be under-weighted. While the overall staff-student ratio is quite good (presumably including hourly-paid instrumental/vocal teaching staff), the 19.3:1 ratio of students to academic staff is on the high side.

Infrastructural support for research is conventional, but in some areas, such as performance, seems to suffer from inadequate provision of facilities. The decision not to form clusters is probably sound, although the Department may wish to consider how research clusters might aid both internal and external profiling. The best sort of cluster arrangement is when it arises naturally from mutual research interests rather than being handed down as a kind of catchall for perceived research groupings. The 'affiliate' scheme for mentoring is excellent and should be taken up elsewhere.

Concerning recommendations from the last RQR Quality Profile (2009), it is clear that performance and composition remain important features resulting in significant outputs, but there still needs to be a clearer profile in terms of collaboration and the creative process in particular relating to traditional music. In terms of the present review, composition is less consistent in



terms of product with results at the top and lower end of the scale. It is clear that the provision of sabbatical leave remains a problem. While a great deal can be managed internally to facilitate lighter teaching loads in relation to near-complete research projects, the central process of granting leave seems inappropriate to the needs of Music. In what is a relatively large Department, the practice of only allowing a single person to be put forward for study leave per annum is counter-productive, as is the late notification of leave being granted. Another area where central support could be beneficial is in providing research funds on an 'across the board' basis for new staff; something along the lines of a personal research account in the probationary period. It is also evident that a great deal is required of senior staff, all of whom are clearly highly productive (this would also prove a draw where recruitment is concerned), in terms of mentoring and other research-related administration. To an extent this can be regulated locally, but the University as a whole needs to have a more clearly formulated policy regarding such matters.

The statistics relating to outcomes from PGR and PGT students is unclear in terms of numbers graduating (rather than percentages). Evidently, there is something of a crisis in securing funding at both PGR and PGT level in Ireland (see below regarding PG research education). While applications for both PGR and PGT may relate to the standing of the Department, a key leverage factor is accessibility to funding for study. A strategy to deal with this funding deficit needs to be addressed at an institutional level.

RAI 1 – Selected published output

The selected published output of the Department has been demonstrated to be of a very good standard.

RAI 2 – Total published output

The total publication output for the period from 2008-2014 seems appropriate with one or two exceptions. Headline publications are placed with very reputable publishers and are evidently of high quality. The total published output of the Department has been demonstrated to be of a good standard.

RAI 3 – Peer esteem

The peer esteem activity of the Department has been demonstrated to be of a very good standard.

RAI 4 – Research-related activity

It is evident that the Department at UCC is a major regional player where research is concerned with a distinctive national and, in certain areas, international profile. Irish traditional music has a long history at UCC and remains well supported via the Arts Council funded 'artist in residence' scheme. Other activities include symposia of a credibly international character and, in relation to the legacy of Aloys Fleischmann an education resource of regional and national significance. Senior members of staff act, often selflessly, in editorial and advisory roles (notably JSMI and Ethnomusicology

Forum). These activities do much to flag up the significance of the Department on the national and international stage.

- The research seminar series, while common in most universities in Ireland and the UK, appears to be well supported with contributions from PhD students, staff members and distinguished visitors (Stobart, Sloboda, Trippett). The balance appears to be well-suited to the research activities of the Department and the needs of postgraduate students.
- Collaboration with other institutions is extensive. Where performance is concerned these include Southbank Gamelan (London, UK), AHRC Centre for Musical Performance as Creative Practice (Cambridge, UK), The Sibelius Academy (Finland) and the University of Cape Town (South Africa), Merce Cunningham Dance Company (USA) and the University of Limerick.
- Research mentoring is carried out on a regular basis in the Department in relation to PGR grant applications and research grant applications.
- Outreach activities include the 'Connections' project relating to arts and health-care initiatives in the Cork area; extensive Arts Council-funded education projects; lectures (later published) on many aspects of Irish Traditional Music delivered by recognised experts in the field.
- There is evidence of external engagement in a number of areas including the founding of the Society for Music Education in Ireland (a member of staff is currently secretary); treasurer of the Irish Council for Traditional Music; Departmental composers are active in the promotion of contemporary music through the Contemporary Music Centre, Dublin.
- Research-led teaching is evident at a number of levels including American shape-note singing, jazz improvisation, composition, experimental music, film music, Italian and English Baroque music, gender and sexuality in music, editing early music, early music performance, performance on the gamelan, digitisation (PGR).
- Support for scholarly institutions is shown in the membership of learned societies (Society for Musicology in Ireland, including in two cases formerly Council membership, the American Musicological Society), chairing of sessions at international conferences, conference organising both specific and plenary (SMI); journal editorships (SMI, The World of Music, Ethnomusicology Forum), Panel chairing (AHRC).
- Research-focused public engagement relates to the legacy of Professor Aloys Fleischmann, the holdings of Irish Traditional Music and making these available to the interested public (local, national and international).

The research-related activity of the Department has been demonstrated to be of a very good standard.

RAI 5 – Postgraduate research education

Since the research review of 2009 it is clear that a more supportive approach to PGR progression has been adopted with appropriate staging posts for students and a stronger sense of mentoring. However, in terms of developing a strong profile in PhD research, the results appear disappointing. Judging from RAI 5, the ethnomusicology PGT MA seems to attract respectable

numbers, but the PhD programme seems decidedly undersubscribed. It is not possible to judge the rate of progression from MA to PhD, but this should be one area to examine in more detail. Evidently there is a major problem regarding funding at both MA and PhD level (with the exception of the bequest-supported MA places), but it is a pity that a Department with evident research distinctiveness should not attract more doctoral students. The postgraduate research education of the Department has been demonstrated to be of a good standard.

RAI 6 - Research income

This has to be seen against the background of the relatively low accessibility of research funding for humanities in Ireland. However, from a low base in 2009, there seems to have been a steady increase, although much of this is attributable to the EU funding for two staff members. There is a creditably high 'hit' rate in achieving Arts Council funding. While there has clearly been an effort to raise research income funding, this does not represent a secure financial stream.

The research income activity of the Department has been demonstrated to be of a fair standard.

Areas of good practice

1. There is a high proportion of research excellence of international quality across a broad range including musicology, ethnomusicology and composition. Although in national terms the Department of Music at Cork is large, the spread of expertise is notwithstanding impressive and shows every indication of sustained excellence comparable with some of the best units in Ireland and the UK.
2. Support for individual research is a healthy characteristic in Music, but does not preclude the formation of cross-disciplinary clusters.
3. While the Department provides a full undergraduate curriculum there is a clear sense in which teaching at undergraduate and postgraduate levels is informed directly by research expertise.
4. The link between formal research and performance in both musicology and composition is certainly to be commended and reflects contemporary developments across both the musical profession and scholarly community.
5. The increase in internationalisation since RQR 2009 both in terms of support for musical institutions and links with a range of institutions and performing bodies worldwide is certainly to be commended and adds both reach and distinctiveness to the Departmental profile.
6. The involvement with research-based outreach programmes relating to music education and traditional music is to be commended for a clear engagement with regional and national aspirations.

7. The recent success in gaining research fellowships is to be commended as is the use of these awards to increase contacts and affiliations abroad.
8. The research affiliate scheme introduced in 2012 is commendable in the way it keeps recent PhD graduates connected and in extending the sense of a research community.
9. In composition the relatively high rate of success in gaining grants from the Irish Arts Council and local arts bodies for specific projects shows imagination and energy in an environment of fiscal difficulty as do their connections with the creative industries.
10. The Department's willingness to host both plenary and subject-specific conferences is commendable in terms of its service to the broader scholarly community and the way in which it increases opportunities for networking and academic interchange.

Recommendations for future development

There are evident areas of excellence in Music and these should be defended, particularly where individual researchers are concerned. Nevertheless, there is the potential for cross-disciplinary work regarding performance research, possibly in relation to 'local musicking' and aspects of ethnomusicology. However, while research funding is scarce the income of the Department relies heavily on a healthy student intake, thus teaching has to be viewed as a priority.

1. The recent creation of a School of Music and Drama and Theatre Studies seems to have been welcomed by both the constituent departments. The exploration of areas of common expertise, such as performance practice, might lead to fruitful research collaboration while avoiding unnecessarily artificial groupings.
2. The rich legacy of Traditional Music holdings could be further strategised as both a regional and national resource.
3. While support for individual scholarship is an excellent characteristic of research in Music, the Department might explore further research groupings within the expertise of the existing staff with a view to strategic appointments when the opportunity arises.
4. In order to maximise staff research time, the Department might consider investing resources in a teaching fellowship with some administrative duties.
5. Clearly great strides have been made in mentoring and progression where postgraduate research students are concerned, but the Department should consider ways in which to foster a greater sense of postgraduate community; a clearer articulation between the MA and PhD programmes might also prove beneficial where student research culture is concerned.
6. More mentoring for staff in terms of appropriate grant application at Departmental and institutional levels could result in great dividends.

7. While the RQR regime stays in place, presumably with another exercise in five to six years' time, it would be wise for each researching staff member to develop a medium term research output plan. This would also enhance planning where shifting teaching and administrative loads are concerned.
8. In tandem with this recommendation it might be beneficial to develop a clear Departmental research strategy concerning outputs and grant raising over the next five years while not excluding bigger projects that might fall outside the RQR cycle.
9. The consistent capturing and documentation of performance and improvisation events as it relates to research would almost certainly be beneficial over the next census period.
10. It would clearly aid many aspects of research culture if the Department could be sited, perhaps in the context of a creative hub, closer to other departments and to the holdings - music, special collections - of the main library.

Concluding statement

A high level of outputs were rated 'excellent' with very few at the lower end of the scale. While this is a sound indicator of much international excellence, it also denotes the fact that there are areas for improvement and the need to sustain excellence where it already exists.

The research activity of the Department has been demonstrated to be of a very good standard in terms of originality, significance and rigour comparable with such work internationally.

Panel O: Drama and Theatre Studies

Introduction

The Department of Drama and Theatre Studies (DTS) is a small unit comprised of four FTE staff (three permanent appointments and one 12-month contract). At the time of the previous RQR DTS was overseen by a multidisciplinary board with membership drawn from several academic departments within UCC. In line with the recommendations made then, DTS subsequently became a stand-alone Department within a newly created School of Music and Theatre Studies. All of the academic staff working in DTS combine research with teaching and supervising on undergraduate and graduate degrees in Drama and Theatre Studies (BA, MRes, MPhil, PhD). Research in DTS includes, but is not limited to, work on German-language theatre, adaptation, Irish theatre, contemporary performance and Practice-as-Research (PaR). All of the permanent academic staff in the Department are lecturers in the earlier stages of their careers, with one member of staff in the establishment period.

RAI 1 – Selected published output & RAI 2 – Total published output & RAI 3 – Peer esteem

The DTS submission contained research through written publication and practice. This is in keeping with disciplinary norms for theatre and performance studies. The submission included three Category A staff and one Category B staff (who left the university early in the review period). No outputs were submitted for one member of staff.



Overall the research activity in DTS was evaluated as 'good', with elements of very good work that had the potential to make a significant impact on the discipline (along with a smaller amount of fair work within the profile). There is promising research going on in DTS that, if nurtured, could contribute further to the discipline in Ireland and internationally. The Panel observed that this potential has been somewhat circumscribed by staffing instability within DTS and the fact that members of staff in the early (sometimes very early) stages of their careers have been required to assume responsibilities beyond those one would normally expect for colleagues at their career point.

As staff have been focused on maintaining the day-to-day operations of DTS, especially towards the end of the review period, the Department has not been in a position to develop and begin to implement a research strategy. Following on from this review, then, there is a need to formulate a concrete, distinctive research strategy for DTS at UCC and detail the steps required to realise it. Despite the absence of a larger strategic framework, however, there is strong evidence that staff in DTS are seeking to contribute to current debates within theatre and performance studies in Ireland and abroad, through their individual research programmes and through activity in wider scholarly and professional communities (see also RAI 4, below).

As noted above, the submission contained both written and practical outputs. The former were generally stronger in quality than the latter. To some degree this simply reflected the normal variations one would expect within any submission. To a greater extent, however, it was because the documentation provided often did not make the research imperatives, questions, methods and findings of each PaR output as clear as might be wished. As a result, there is a need for DTS to develop a more structured framework for conducting, documenting and disseminating its PaR.

Research facilities are very poor, both in terms of their condition and supply, especially within the context of a research-led university. DTS does not have its own theatre (a basic requirement for any Drama Department), it has limited rehearsal space and technical equipment is inadequate. It must compete with external, private

companies for access to the Granary Theatre (at market rates). These constraints are particularly significant given that staff and research students are undertaking PaR, which requires adequate provision of specialist theatre facilities (and it is notable that the growth in MRes and PhD activity in DTS has been driven by students pursuing PaR projects). The Panel agreed that the theatre facilities at UCC are among the worst - possibly the worst - they had seen at any university.

The Panel recognised the need for mentoring of staff within DTS in order to support individuals' development as researchers and, by extension, enhance Drama's ability to contribute to the creative arts at UCC and scholarship within Ireland and abroad. We would have a welcomed a clearer sense of how School structures might best support the development of both constituent disciplines within the School and encourage cross-disciplinary work where appropriate (while respecting the different disciplinary histories and critical concerns of Drama and Music).

Both the selected published output and the total published output of the Department have been demonstrated to be of a good standard. The peer esteem activity of the Department has been demonstrated to be of a good standard.

RAI 4 - Research-related activity

Core staff in DTS are contributing to scholarly organisations within the discipline. They are initiating and participating in research projects that cross disciplines within UCC and connect research at UCC to broader theatre and performance research networks internationally. Their activities are impressive given that a number are early in their careers and the additional responsibilities that they have had to assume. Staff also contribute their expertise to professional and community organisations (e.g. sitting on boards of prominent theatre companies).

Within the Department, DTS features a mix of established (e.g. Perforum) and emerging (e.g. the Centre for Interdisciplinary Research in Performance Practice) mechanisms to support research. Although



some imprecision is understandable given its relative infancy, the Panel was not entirely clear how the CIRPP is intended to map on to the Department's research; e.g. whether it is a distinct cluster with a specialised remit within the broader research programme of DTS or whether it is intended to encompass the Department's research as a whole, and connect it with researchers doing cognate work in other areas within UCC. Both models are viable in principle, but have different implications for how research activity within DTS might be organised in the future, and imply different roles for CIRPP within the Department's future research strategy.

The research-related activity of the Department has been demonstrated to be of a good standard.

RAI 5 – Postgraduate research education

There has been some growth in PGR numbers in the latter part of the review period. Numbers are modest, but in line with what might be expected given the small number of staff and their relative career points. DTS has had some success in securing PGR funding within UCC. All of the PhD students are pursuing PaR projects. As noted above, research facilities within DTS are inadequate, especially for PaR projects. Staff are supervising PGRs effectively (often in the context of being relatively recent PhDs and not having supervised to completion themselves). In an independent meeting with the Panel the graduate researchers described their supervisory support in highly positive terms (and contrasted this strongly with the poor facilities in which they were undertaking their work). Appropriate supervision and monitoring structures appear to be in place and operating effectively (e.g. annual review, professionalisation opportunities). Students spoke positively about modular provision within structured programmes. Minor questions were raised about the organisation of this provision, and progression expectations where joint students were working in two departments. The Panel observed that PGR students were teaching on the undergraduate programme earlier in their degrees than is common elsewhere. While this situation has been exacerbated by the particular challenges of organising teaching provision this academic year, the Department will want to consider, for the future, where teaching experience is best positioned within the cycle of PGR development. Overall, the Panel was impressed by the PGR students in DTS. They are showing initiative and working collaboratively (e.g. by setting up their own research seminar series) and using mechanisms within the Department (e.g. Perforum) and UCC well.

In its submission for RAI 5 the Department states that it aims to restart a revised MA in the near future. Given the existing constraints on staff, the Panel was concerned about the viability of introducing further provision without a corresponding improvement in staffing and facilities. The MA model also appeared to depend on an element of goodwill contribution from staff in other departments. This may have collegial and pedagogical value, but it may also entail unpredictability in terms of degree management.

The postgraduate research education of the Department has been demonstrated to be of a good standard.

RAI 6 – Research income

DTS reports a headline figure of €97,848 during the period. Income is derived from internal and external sources. The majority of the headline figure comes from two sources: a grant from Arts Council Wales (£37,000/€50,000) to tour *Performing the Maids* (the PI is external to UCC) and €33,000 from UCC in PG student funding. DTS has been successful in winning a number of small, internal grants in order to seed projects.

The research income activity of the Department has been demonstrated to be of a fair standard.

Areas of good practice

The Panel was aware of the challenging conditions in which DTS academic staff have been working. Nonetheless, we observed a number of areas of good practice, including:

- Staff are active, both as individual scholars and as contributors to broader research and professional networks (both within UCC and nationally/internationally). The extent and diversity of these activities are positive. Activities such as hosting the Irish Society for Theatre Research conference demonstrate the Department's commitment to contributing to the discipline, and placing DTS within broader theatre and performance research networks. This will benefit the work of both DTS staff and its research students and helps lay the groundwork for future activities.
- There is a core of good research being undertaken within the Department, with the potential for further development with appropriate support and strategic thinking.
- The Department's links with creative industries are positive (and are helping it to mitigate, where possible, some of the issues related to facilities).
- The PGR culture developing in the Department is promising. Students clearly feel supported by their supervisors, they are taking initiative and are attracting funding.

Recommendations for future development

Staffing

1. Staffing in DTS needs to be stabilised and enhanced. The Department is too reliant on a small number of early-career researchers. We recommend that UCC make a senior level appointment in the Department and that this appointment be in theatre and performance studies specifically. We would anticipate this person taking on leadership responsibilities within DTS and contributing effectively within the broader School.
2. We recommend that the School ensures that mentoring, professional and research development operate effectively and consistently across the two disciplines that comprise the School.
3. We recommend that teaching loads in DTS be brought into line with the average in CACSSS. A recommendation related to this was also made in the previous RQR and does not appear to have been acted upon.

Research Strategy

4. We encourage DTS to develop an ambitious, yet realistic, research strategy at the earliest opportunity. As part of this, the Department should consider, among other things:
- What its research aspirations are and how they might be realised concretely;
 - How its research programme might be distinctive vis-à-vis other Drama departments in Ireland and elsewhere;
 - How it might best support a “mixed economy” of research outcomes (i.e. both conventional written publications and PaR);
 - Being selective and prioritising research activities, in order to encourage the translation of activities into specific outcomes most effectively.
 - The role and resource implications of existing and planned postgraduate programmes within the Department;
 - Identifying and pursuing external research income, where possible.
5. We recommend that DTS develop mechanisms to support PaR projects. These should aim to ensure that underpinning research imperatives are visible, that process is documented and that findings are disseminated to scholarly audiences (among others, where appropriate).
6. We recommend that the role and timing of teaching experience within PGR development be reviewed.

Research Facilities

7. Within resource constraints, we recommend that UCC review facilities within DTS and develop a plan to address the short-term and long-term requirements of the Department. Specialist facilities are key to Drama as a subject, not only in terms of teaching but also research and public engagement.
8. If a Creative Hub/Performing Arts centre is developed at UCC, we recommend that DTS (along with Music) be involved in its formulation, in order to ensure that the Department’s research and teaching needs are at the core of the enterprise rather than adjunct to it.

Concluding statement

As noted above, the Panel found the research activity across the elements to be good, with some elements very good (and a smaller number of fair elements). Outputs taking the form of written publication generally scored higher than PaR outputs.

The research activity of the Department demonstrates significance to the discipline and rigour to a good standard.

Panel O: Overall comments

The Panel would like to commend UCC and the subject areas for undertaking this process as a means of allowing space for reflection, self-assessment and an opportunity to inform and further develop research planning and strategy. The Panel would like to propose that the following be considered prior to any future Research Quality Review.

- That clearer guidance be available regarding the selection of appropriate outputs by individual researchers and that UCC allow the submission of 250-300 word documents for practice-based research outputs in cases where the research imperatives and research process of an output might further be made evident by descriptive and contextualising information.
- That every effort is taken to accurately and consistently record financial data that takes into account all potential funding streams relevant to the subject areas.
- That remote reviewers should be encouraged to provide appropriate written feedback to contextualise the scores they have awarded.
- That there should be an opportunity for Panel Chairs to meet during the site visit to discuss working process and common findings.





Panel O: Recommendations to the University

It is recommended that consideration be given to the following:

1. Continue to work with appropriate agencies such as the Irish Humanities Alliance to highlight the importance of Humanities research and to promote its place in national research strategy, in organisations such as the Irish Research Council and European initiatives such as Horizon 2020.
2. Develop better communication and transparency regarding the different responsibilities held by various levels of the institution (senior management; College; School and subject areas) regarding research development and strategy.
3. Vigorously pursue plans for a Creative Hub, which has the subject disciplines of music, drama and theatre studies at its core, to provide an appropriately resourced physical research infrastructure for current activity and to enable growth in strategic areas. It will be crucial to engage staff at the earliest opportunity to ensure that any future capital investment maximises the potential of the subject areas. In the interim, an urgent review of current facilities for theatre and drama is required (both locally managed space and the Granary Theatre) in order to address the significant deficit of appropriate spaces and technical provision for practice-based research conducted by staff as well as MRes and PhD students.
4. Retain good research-active staff at all levels in order to facilitate the continuing development of a sustainable research culture. Several aspects of the current situation including procedures for promotion, arrangements for sabbatical leave and higher than normal teaching and administrative loads, are not conducive to retaining staff.
5. Make a senior appointment in Drama and Theatre Studies to provide strategic leadership and a vision for future development in the discipline. In addition, it is imperative that UCC works to ensure continuity of core staffing in this area to ensure stability for the subject moving forward.
6. Develop appropriate support and mentoring structures for early-career and mid-career staff to foster opportunities for career development.
7. Develop clearer guidelines on promotion that embrace the full spectrum of research activity appropriate to the subject areas of music, drama and theatre studies and look at how the University can manage expectations regarding the availability of promotion in the current climate of financial constraint.
8. Consider how School management, reporting and resource allocation can best support the development of the constituent elements of the School and cross-disciplinary initiatives where appropriate.
9. Identify and implement ways to alleviate the heavy administrative burden faced by researchers in small units given how this impacts on research capacity.
10. That CACSSS support the School to use the sabbatical system to the fullest extent that it allows in order to facilitate sustained periods of time for research development and the completion of research projects.
11. For CACSSS to continue to seek ways to support postgraduate research funding to help facilitate the growth of the postgraduate community.
12. To ensure that UCC's entire infrastructure (including Human Resources and the Finance Office) has the requisite knowledge to support researchers undertaking research as a viable part of their contracts and to facilitate the smooth operational running of research grants.





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