

A Students as Partners Approach to Analysing Student Engagement Data for Teaching and Learning

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Executive Summary

This project used a Students as Partners methodology to analyse responses to the 2023 Irish Survey of Student Engagement. Five postgraduate students worked with the project team to closely analyse the survey responses in five key areas:

1. Research Skills
2. Entrepreneurship and Innovation
3. Supervision
4. Financial Considerations
5. Work-Life Balance

On the whole, the students found that responses for University College Cork (UCC) were comparable with other Irish Higher Education Institutions in the above areas, but offered some potential explanations for differences in experience across the disciplines. Specifically, the questions of work-life balance and funding offer useful starting points for better understanding the differences in retention between Arts and Sciences students. Similarly, the disciplinary focus of many postgraduate programmes has resulted in positive experiences regarding research skills acquisition while transferrable and interdisciplinary skills such as entrepreneurship and innovation are less favourable. Lastly, it is worth noting that elements of the survey itself such as question wording (e.g. “avail of” rather than “are available”) and survivorship bias of the survey and inherently limit its usefulness for understanding some of these topics.

Based on their analysis, recommendations for local interventions which UCC could adopt are also including which range from creating an online hub for policies and resources available to postgraduate students to the introduction of new modules specifically designed to promote transferrable skills through organising, funding, and running a conference or seminar series.

Method

The Postgraduate Irish Survey of Student Engagement is conducted every second year. The results are then anonymised and distributed to the participating institutions. The project team had access to the UCC and national datasets which the student partners then analysed in more detail. After initial workshops contextualising the survey and the roles of the student partners, they were provided with the data and each selected their preferred area for primary analysis as follows:

1. Research Skills
2. Entrepreneurship and Innovation
3. Supervision
4. Financial Considerations
5. Work-Life Balance

With access to both quantitative and qualitative responses including the full set of national responses as well as the subset of UCC responses, students then considered the ways in which UCC responses did or did not map onto national trends. The results are discussed in the next section.

Results and Discussion

While students' evaluation of their discipline-specific skills development was generally positive, there is a worrying gap between the reported experiences of Arts students in comparison to Science students. At the same time, there appears to be a significant lack of cross-disciplinary skills training, regardless of discipline, (e.g. entrepreneurship and innovation) suggesting a need to either rephrase the question to ask if opportunities to develop those skills are available (rather than whether students have availed of them) and/or to provide more opportunities for the development of these broader skillsets. Supervision, funding, and work-life balance are key aspects of retention as demonstrated by the withdrawal consideration data.

Importantly, a significant survivorship bias was noted, limiting the ways these results can represent the full student experience. Condensed versions of the analyses by the student partners are below.

Research Skills, Katie Marah

The provision of research skills training is essential to PhD students to ensure they become competent and capable professionals. However, while multiple authors contend that the need for

PhD graduates to have a diverse body of knowledge and skills, there is little literature which notes the research skills present at PhD entry (Hasgall, Saenan and Borrell-Damian, 2019; Mewburn et al., 2018; Germain-Almartine and Moghadam-Saman, 2020; as cited in Mantai and Marrone, 2021). Understanding the necessity of research skills training for student engagement and retention, Marah therefore examined how the provision/lack of provision of adequate research skills training impacts on UCC PhD students' overall engagement and retention with the goal of assessing the differences in provision of research skills training between the arts and humanities' PhD cohort and the STEM PhD cohort.

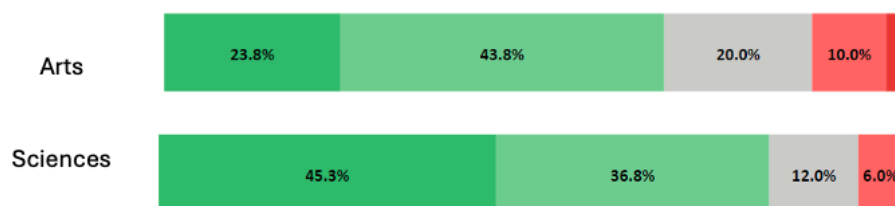
While UCC's responses in this area generally accorded with the national trends, there was a consistent gap between the responses of Arts students in comparison with Science students. There wasn't enough information in the responses to indicate causes for the gap, but the often 10% difference in favourable responses from the two cohorts in the following areas is striking:

- access to specialist resources and facilities necessary for research
- access to a relevant seminar programme
- the development of skills in applying appropriate research methodologies, tools and techniques
- development of skills in critically analysing and evaluating findings and results
- confidence to be creative or innovative

There is a clear contrast between the perceived availability of resources and facilities between Arts and Sciences students:

I have access to the specialist resources and facilities necessary for my research

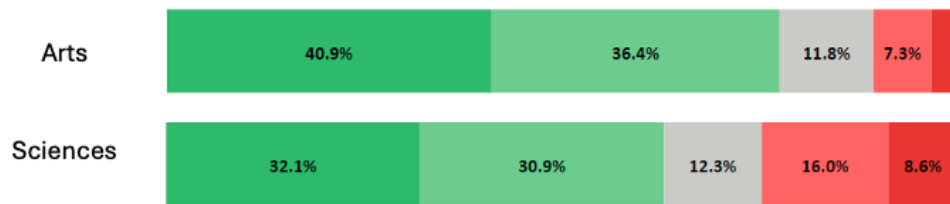
● Definitely agree ● Mostly agree ● Neither agree nor disagree ● Mostly disagree



There was a similar divide between responses as to whether or not departments provide access to a relevant seminar programme in which, presumably, students would be exposed to key skills and acculturated to disciplinary norms:

My department provides access to a relevant seminar programme

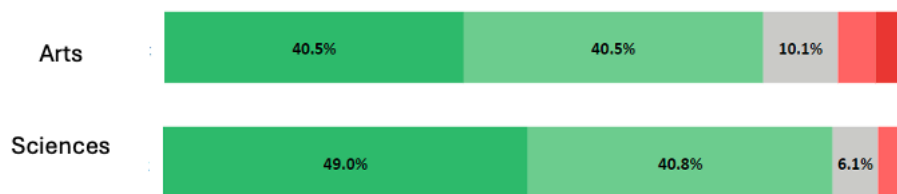
● Definitely agree ● Mostly agree ● Neither agree nor disagree ● Mostly disagree ● Definitely disagree



As regards the acquisition and development of research skills, there is, again, a divide between Arts and Science students although the overall UCC response is in line with the national averages:

My skills in applying appropriate research methodologies, tools and techniques have developed during my programme

● Definitely agree ● Mostly agree ● Neither agree nor disagree ● Mostly disagree ● Definitely disagree



Unfortunately, there is not enough data to determine potential causes for these divides, but it is worth seeking to better understand the different ways research skills are taught across the college.

Entrepreneurship and Innovation, Marnina Winkler

Reviewing the responses to questions around entrepreneurship and innovation, Winkler found that responses were generally positive to questions asking about identified training and developmental needs (Figure 1), agreeing to a training and development plan (figure 2), and receiving training to develop transferable skills (figure 3), the majority of students agreed that they did not “avail of” opportunities around training in entrepreneurship and innovation (figure 4), putting into practice entrepreneurship and innovation (figure 5), and working collaboratively with industry (Figure 6), civil service, and/or public organisations (figure 6).

Figure 1:

My supervisor(s) help me to identify my training and development needs as a researcher

● Definitely agree ● Mostly agree ● Neither agree nor disagree ● Mostly disagree ● Definitely disagree



Figure 2:

Have you availed of the following opportunities during your research degree programme?



Figure 3:



Figure 4:



Figure 5:



Figure 6:

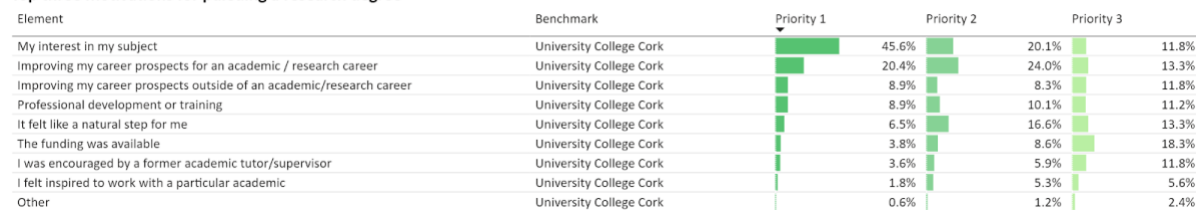


The disparity in these results raises the question of whether (a) the phrasing of the survey question is such that it is not capturing the desired information or (b) if there is a lack of opportunities for students to “avail of” as the question does not ask if these resources exist, but rather whether students have engaged with them and, of course, one cannot avail of something which is not available.

Determining whether (a) or (b) is true is vital as entrepreneurship and innovation includes many hard and soft skills directly relevant to students’ future career prospects, highlighted by the reasons students provide for starting their PhDs (Figure 7).

Figure 7:

Top three motivations for pursuing a research degree



Top three type of career you have in mind for when you finish your research degree

Element	Benchmark	Priority 1	Priority 2	Priority 3	
Academic career in higher education (either research and teaching, or teaching only)	University College Cork	35.0%	18.7%	18.7%	11.9%
Research career outside higher education (e.g. in a private research organisation, a charit...	University College Cork	25.5%	18.7%	18.4%	
Research career in higher education	University College Cork	12.5%	28.5%	2.1%	11.3%
Not sure or not decided yet	University College Cork	8.6%	2.1%	13.1%	
Returning to, or remaining with, employer who is sponsoring your degree	University College Cork	5.0%	2.7%	3.0%	
Any other professional career	University College Cork	3.9%	9.5%	14.2%	
Self-employment (including setting up your own business)	University College Cork	3.9%	5.0%	6.8%	
Other career in higher education	University College Cork	2.1%	3.0%	6.8%	
Other	University College Cork	1.5%	1.2%	1.5%	
Returning to, or remaining with, employer who is not sponsoring your degree	University College Cork	1.5%	2.7%	1.5%	
Teaching (at a level below higher education)	University College Cork	0.6%	4.7%	4.5%	

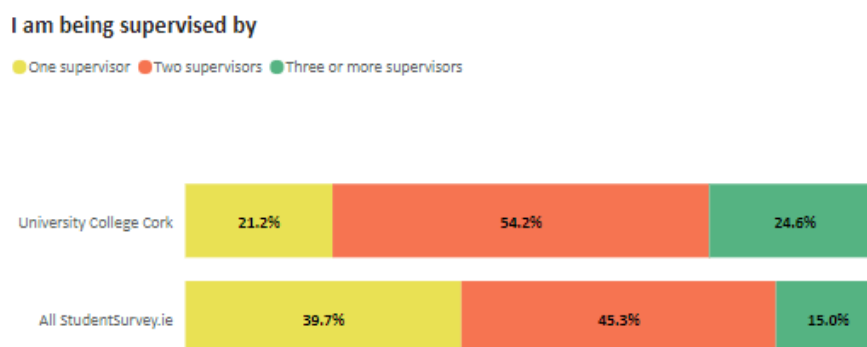
These results combined show that there is a desire for careers outside of academia and to acquire entrepreneurship and innovation skills. But as highlighted earlier there was a very high percentage of students saying they never availed of opportunities that targeted these skills but the question does not ask “does your University offer entrepreneurship and innovation opportunities”, it asks have the students availed of the opportunities. This is where the thought of a lack of opportunities arises. It is not the question itself, but the opportunities that PhD students have (or, rather, don't have) at UCC, where they can put their training the transferable skills into practice.

Supervision, Darragh Ó Cruadhlaich

The modern PhD was introduced in Ireland in the mid-1920's and has its origins in a 'master-apprentice' model of delivery, with supervision seen as a private relationship between consenting adults (Taylor, Kiley & Humphrey, 2018). University College Cork (UCC, 2023a) is a research-intensive university that has sought to better regulate and structure postgraduate research students' experiences over the last 15 years. The current *UCC Policy on the Supervision of Research Students* (UCC, 2021) supersedes earlier policies from 2009 and 2010; it applies to both Master by Research and PhD by Research students. The current *Progress Review Policy for Research Students* (UCC, 2014) will be replaced by a new *Policy on Progress Reviews for Research Students* (UCC, 2023b) from February 1st, 2024. The quality of postgraduate research supervision is recognised as a major factor in explaining delays and non-completion (Wadesango & Machingambi, 2011). This is particularly evident in the qualitative responses of UCC postgraduate research students to studentsurvey.ie.

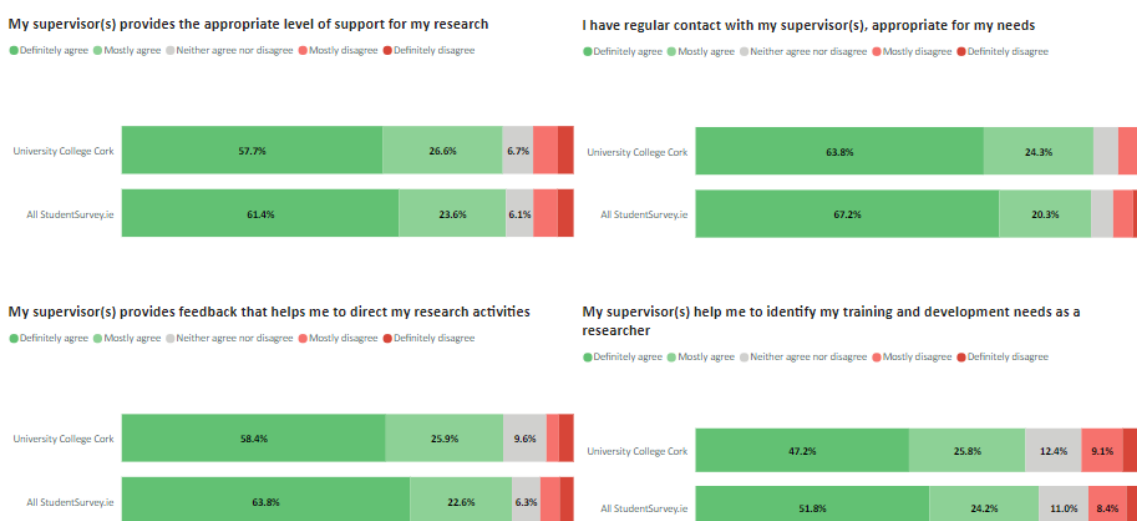
The *UCC Policy on the Supervision of Research Students* (UCC, 2021, p.1) states, “UCC follows a team supervision model. All ‘Research Students’ at UCC will have a ‘Supervisory Team’ consisting of a minimum of two members.” In line with this policy, research students at UCC were more likely to be supervised by two or more supervisors than all studentsurvey.ie respondents (78.8% versus 60.3%, respectively; Figure 8). However, these data show that more than one in five (21.2%; Figure 8) postgraduate research students at UCC report that they have only one supervisor, and thus are not being supervised in line with the guiding principles of the University's own policy.

FIGURE 8. COMPARISON OF NUMBER OF SUPERVISORS OF UCC POST-GRADUATE RESEARCH STUDENTS WITH ALL STUDENTSURVEY.IE RESPONDENTS



On the whole, UCC responses as to the quality and experience of supervision are relatively consistent – both across questions and in comparison with the national responses. Specifically, 84.3% of UCC respondents (versus 85.0% overall; Figure 9) definitely or mostly agreed their supervisor(s) provides an appropriate level of research support, 88.1% of UCC respondents (versus 87.6% overall; Figure 9) definitely or mostly agreed they have regular contact with their supervisor(s), appropriate to their needs, 84.3% of UCC respondents (versus 86.4% overall; Figure 9) definitely or mostly agreed their supervisor(s) provide feedback that helps them to direct their research activities, and 73.0% of UCC respondents (versus 76.0% overall; Figure 9) definitely or mostly agreed their supervisor(s) help them to identify their training and development needs. These are encouraging results, but the significant increase in negative responses to the last question referenced above (“My supervisor(s) help me to identify my training and development needs as a researcher”) is worrying as the 14.6% of negative responses is higher than the 6-9% for the other questions.

FIGURE 9. COMPARISON OF SUPERVISION OF UCC POST-GRADUATE RESEARCH STUDENTS WITH ALL STUDENTSURVEY.IE RESPONDENTS



Unfortunately, the qualitative and quantitative data as available to the research team are not linked so it is not possible to try to tease out links between the above results and, for example, those

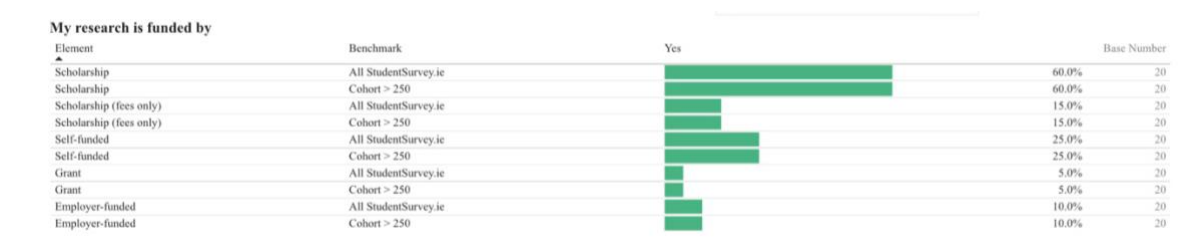
22.7% of respondents who indicated that “supervision” or their “supervisor” were factors in withdrawal considerations. Additional details as to differences correlated to registration as Masters or PhD students, gender, part-time/remote versus full-time enrolment, field of study, academic unit, and year of study are available in the full report at Appendix 1.

Financial Factors and Withdrawal Considerations, Gráinne Mulcahy

Funding appears to be instrumental in reducing attrition and non-completion rates, reducing a reliance on supplementary paid work, thus heightening research performance and completion (Groenvynck *et al.* 2013; Horta *et al.*, 2019; Horta *et al.*, 2018). Additionally, the desirability of a Ph.D. in the labour market, also appears to contribute to the intention to complete a Ph.D. programme, as those undertaking a doctoral degree in the natural sciences are more likely to consider whether their degree is a “bonus in the labour market”, than graduates in the humanities and social sciences (Groenvynck *et al.*, 2013: 208). Mulcahy sought to determine the extent to which these financial considerations – one immediate and one anticipated – correlated with reported consideration of withdrawal from the respondent’s programme. There was a secondary interest in determining whether or not these considerations had any relationship to discipline (as per the second consideration regarding the perceived value of the degree in future employment and, by extension, wages).

In the initial comparison, there is a stark disparity with 25% of respondents from the Arts and Humanities, and Social Sciences, Journalism and Information courses identifying themselves as self-funded in comparison to 3.6% of respondents from the Natural Sciences, Mathematics and Statistics.

Arts and Humanities, Social Sciences, Journalism and Information:



Natural Sciences, Mathematics and Statistics:

My research is funded by

Element	Benchmark	Yes	Base Number
Scholarship	University College Cork	66.1%	112
Scholarship	All StudentSurvey.ie	73.0%	927
Scholarship	Cohort > 250	73.0%	875
Scholarship	Cohort < 250	73.1%	52
Scholarship (fees only)	All StudentSurvey.ie	1.5%	927
Scholarship (fees only)	Cohort > 250	1.5%	875
Scholarship (fees only)	Cohort < 250	1.9%	52
Self-funded	University College Cork	3.6%	112
Self-funded	All StudentSurvey.ie	3.6%	927
Self-funded	Cohort > 250	3.5%	875
Self-funded	Cohort < 250	3.8%	52
Grant	University College Cork	33.9%	112
Grant	All StudentSurvey.ie	27.8%	927
Grant	Cohort > 250	27.5%	875
Grant	Cohort < 250	32.7%	52
Employer-funded	University College Cork	5.4%	112
Employer-funded	All StudentSurvey.ie	5.2%	927
Employer-funded	Cohort > 250	5.0%	875
Employer-funded	Cohort < 250	7.7%	52

Unfortunately, although a similar percentage (25.9%) of Arts and Humanities and Social Sciences, Journalism and Information students reported that they considered withdrawing from their programmes because of financial considerations, the available data does not permit the detailed analysis necessary to determine whether it was the same group as reported self-funding their studies. Further complicating efforts to determine correlation is the fact that a higher percentage (30.6%) of National Sciences, Mathematics and Statistics students also reported that they considered withdrawing for financial reasons.

Arts and Humanities, Social Sciences, Journalism and Information:

Overall Experience How would you evaluate your entire research experience at this institution?

● Excellent ● Good ● Fair ● Poor



I am confident that I will complete my research degree programme within my institution's expected timescale

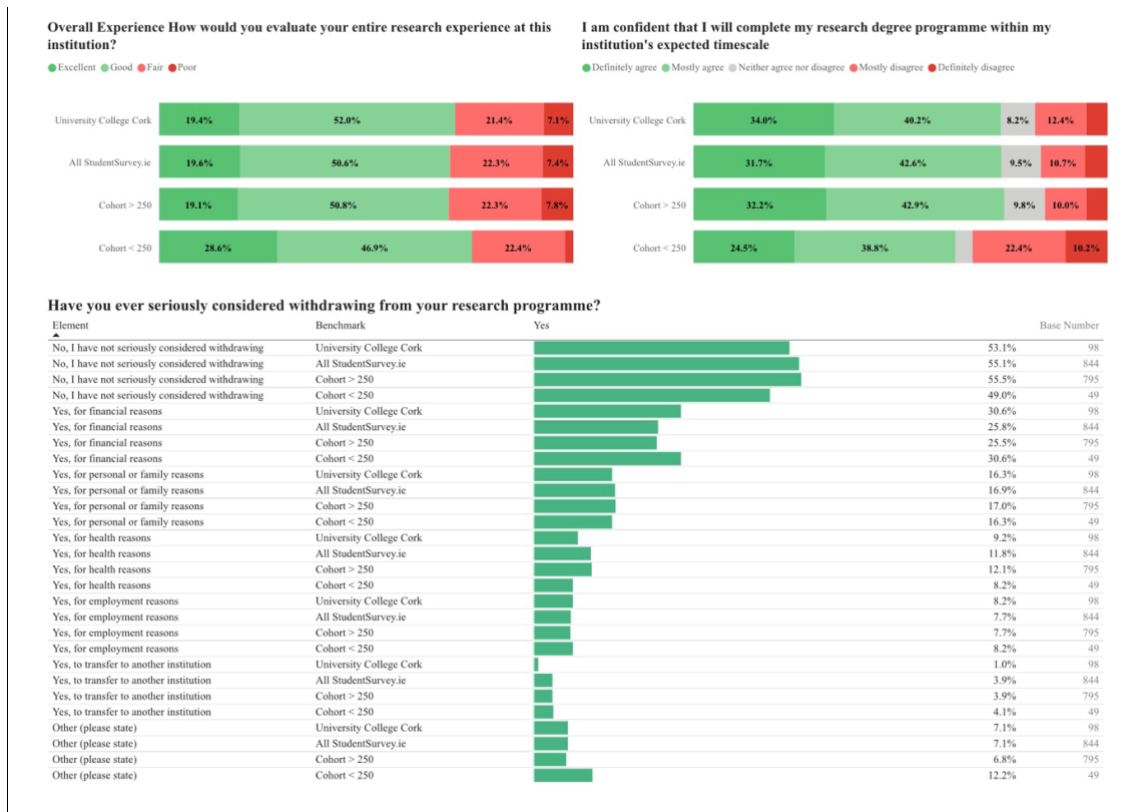
● Definitely agree ● Mostly agree ● Neither agree nor disagree ● Mostly disagree ● Definitely disagree



Have you ever seriously considered withdrawing from your research programme?

Element	Benchmark	Yes	Base Number
No, I have not seriously considered withdrawing	University College Cork	57.3%	82
No, I have not seriously considered withdrawing	All StudentSurvey.ie	57.5%	800
No, I have not seriously considered withdrawing	Cohort > 250	57.8%	760
No, I have not seriously considered withdrawing	Cohort < 250	52.5%	40
Yes, for financial reasons	University College Cork	25.6%	82
Yes, for financial reasons	All StudentSurvey.ie	25.9%	800
Yes, for financial reasons	Cohort > 250	25.7%	760
Yes, for financial reasons	Cohort < 250	30.0%	40
Yes, for personal or family reasons	University College Cork	29.3%	82
Yes, for personal or family reasons	All StudentSurvey.ie	19.5%	800
Yes, for personal or family reasons	Cohort > 250	19.5%	760
Yes, for personal or family reasons	Cohort < 250	20.0%	40
Yes, for health reasons	University College Cork	15.9%	82
Yes, for health reasons	All StudentSurvey.ie	11.9%	800
Yes, for health reasons	Cohort > 250	11.8%	760
Yes, for health reasons	Cohort < 250	12.5%	40
Yes, for employment reasons	University College Cork	7.3%	82
Yes, for employment reasons	All StudentSurvey.ie	7.6%	800
Yes, for employment reasons	Cohort > 250	7.6%	760
Yes, for employment reasons	Cohort < 250	7.5%	40
Yes, to transfer to another institution	University College Cork	3.7%	82
Yes, to transfer to another institution	All StudentSurvey.ie	3.3%	800
Yes, to transfer to another institution	Cohort > 250	3.3%	760
Yes, to transfer to another institution	Cohort < 250	2.5%	40
Other (please state)	University College Cork	6.1%	82
Other (please state)	All StudentSurvey.ie	4.9%	800
Other (please state)	Cohort > 250	4.9%	760
Other (please state)	Cohort < 250	5.0%	40

Natural Sciences, Mathematics and Statistics:



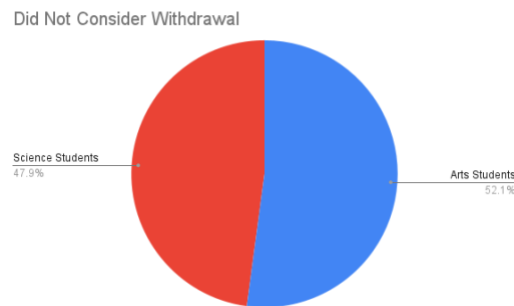
One final consideration when using the Irish Survey of Student Engagement to attempt to understand the financial implications for retention and withdrawal is that only students who did **not** withdraw are represented in the survey as to the best of our knowledge, the survey is only circulated to current students rather than, say, to all students enrolled during a certain period.

Disciplinary Differences and Student Retention, Luke Watson

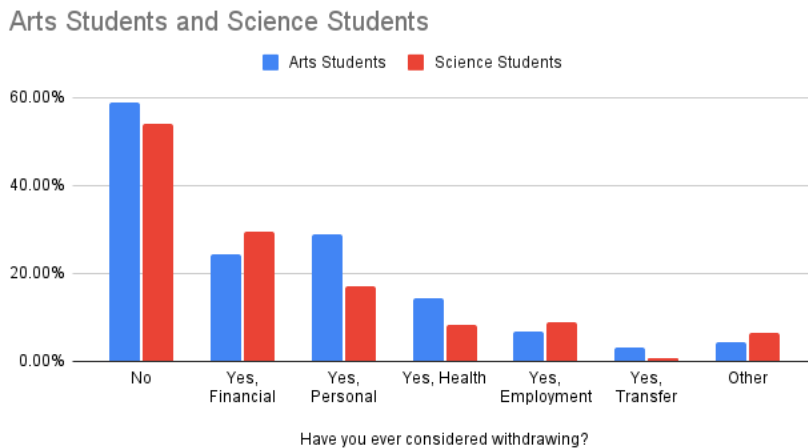
The commonly cited figure for drop out rates amongst doctoral students is somewhere around 50% of all students who undertake a doctoral degree (Caruth 2015). The broad consensus seems to be that students consider dropping out of their course, or otherwise take longer to reach degree completion, after encountering some area of difficulty such as loneliness, responsibilities (both familial and work related), limitations (both time and financial), self-esteem, and advisor relationships (Caruth 2015). Likewise, Frasier (2013) notes that 'Research repeatedly confirms the importance of integration into the program environment and understanding of the expectations of graduate study as critical components of degree progress, completion, and time to degree.' In particular, how the faculty interact with the students and integrate them into the culture of the department impacts the students' interest and commitment to both the department and their degree. While these studies all focus on PhD students/programmes, the StudentSurvey.ie results

incorporate feedback from Masters students as well, offering an opportunity to consider disciplinary differences in a broader context. Using questions about Overall Experience, Personal Outlook, and Research Culture, a snapshot of the experiences of Arts students is compared with Science students (including Food Science and Technology in the StudentSurvey.ie categorisations) here.

Slightly fewer Arts students considered withdrawing from their programme as compared to Science Students

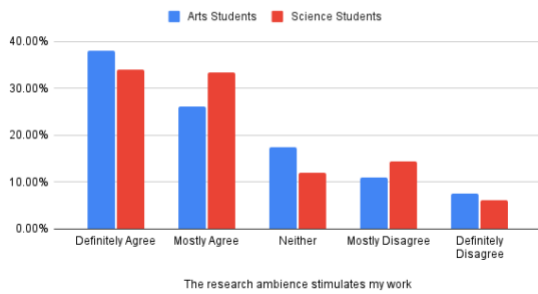


Broadly speaking, students from the Arts cited personal reasons for considering withdrawal (including health) while the Science students cited financial considerations (including employment):

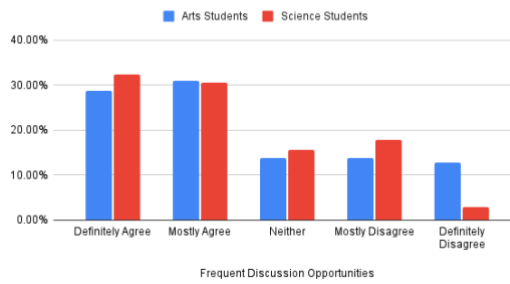


Considering the programme-specific experiences and context, Arts and Science students have quite similar views of their experiences:

Arts Students and Science Students

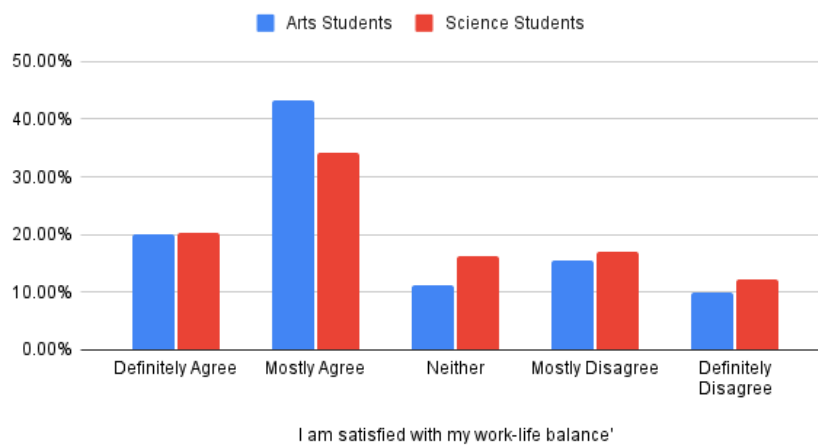


Arts Students and Science Students



So what, then, might explain the divergence in withdrawal considerations noted above? Watson suggests that work-life balance offers an initial explanation worth analysing in more depth (when/if more granular data is available):

Arts Students and Science Students



The above results suggest that Arts students are broadly more happy, or broadly less unhappy, with the workloads assigned to them than their peers in Science courses. This may contribute to the divergence in retention rates observed in figure 1, and even if it is not the sole factor, it nonetheless suggests that more research into divergent student experiences in postgraduate courses across disciplines ought to be conducted to further isolate the root cause of this observed difference. Like others, Watson notes the survivorship bias of the survey which unfortunately limits its effectiveness

Recommendations

Based on the above analyses and the student partners' lived experience as UCC postgraduate students, we offer the following recommendations as to local interventions which UCC could implement to enhance and promote student engagement:

- PG Module (or badge) in which students organise a major event (e.g. conference, seminar series, etc.) with support from the coordinator. Students would agree on a theme, set a

budget, apply for funds, recruit keynotes and other speakers, organise the programme, run the event, etc. thereby gaining key transferrable skills

- Create (and then advertise) a central page on the UCC website (or other location) with all of the policies and resources available to students which is accessible to all current and incoming students (so cannot be on SharePoint or Canvas) and which is kept up to date
- Facilitate staff emails for postgrads who are teaching or otherwise working for UCC – gives students credibility outside of UCC and access to more funding and conference calls than make it to their student emails. (If this is impossible, perhaps find a way to ensure that funding and conference calls go to student email as well as staff lists?)
 - Other suggestions included a Postgrad/PhD common room, mentoring programmes, an academic advisor outside of the supervision team, etc. which are all already available and/or included in existing policies – but students are not aware of them.
- Include non-traditional students in supports (e.g. allow international students to avail of the laptop loan scheme)
- Encourage academic units to open their annual reviews to the broader campus (so, effectively, a series of mini-conferences with opportunities for interdisciplinary conversations)
- Provide postgraduates with workspaces which are integrated into the larger campus community

The above are just a selection of the most-achievable ways for UCC to enhance student engagement and the larger student experience of postgraduates. Additional research into each of the topics discussed here – particularly with access to more detailed data – would help to identify potential causes of the engagement challenges discussed in this report.

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