

Assessing the “Softer Skills” Learning Outcomes in Group Projects

J Paul Hermon, Charles D McCartan
School of Mechanical and Aerospace Engineering



Queen's University
Belfast

Overview

- List of some “softer skills” (aka personal and professional skills)
- Problems assessing with “traditional” methods
- Methods and tools used at QUB
- Observations

Group DBT Projects: “Softer Skills” Learning Outcomes

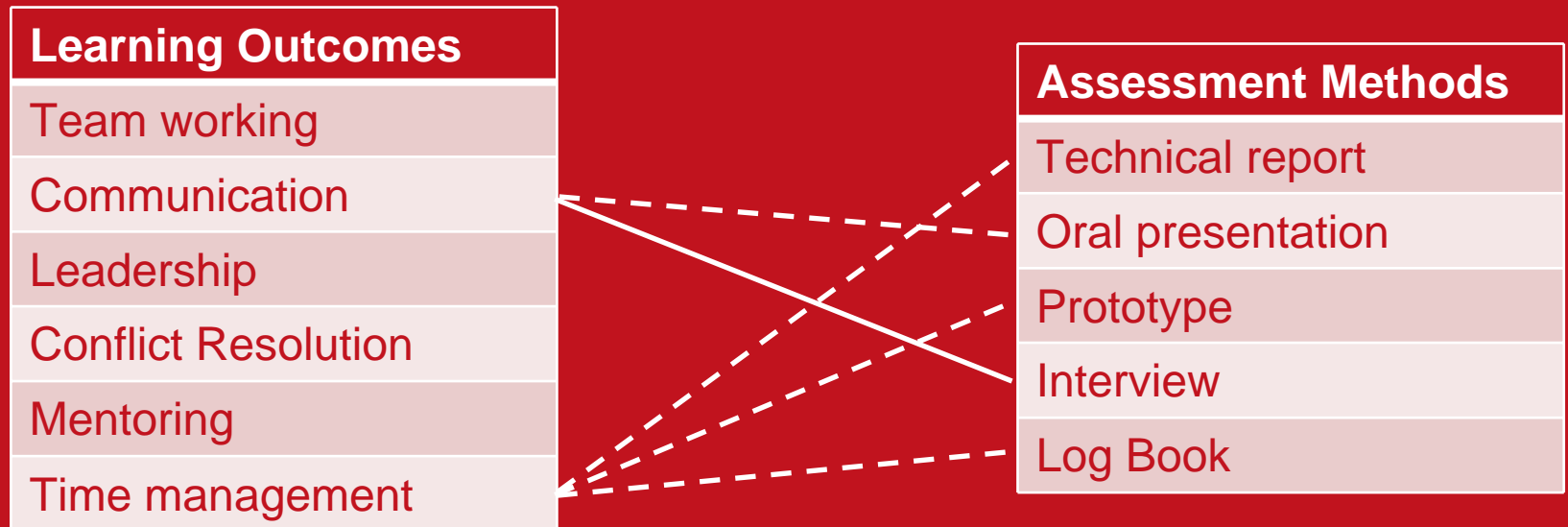
- Team working
- Communication
- Leadership
- Conflict resolution
- Mentoring
- Time management

Group DBT Projects: Traditional Assessment Methods

- Group technical reports
- Group oral presentations
- Prototypes
- Individual interviews
- Project logbooks

Problems Assessing “Softer Skills”

Traditional assessment methods don't easily align with desired learning outcomes:



Assessing “Softer Skills”

“New” assessment methods used to assist in assessment of personal and professional skills learning outcomes:



Does accurate assessment of “softer skills” require face to face contact?

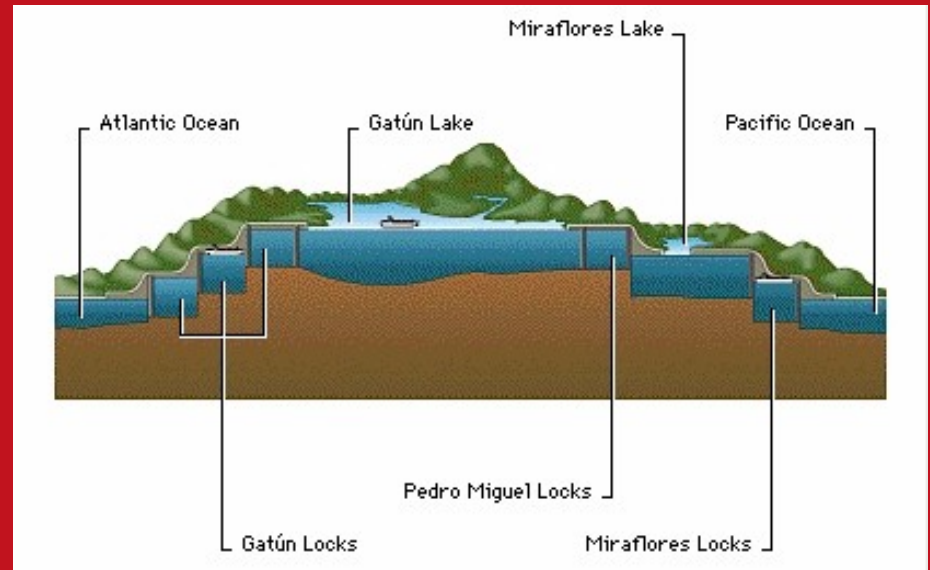


Problems Assessing “Softer Skills” Through Direct Faculty – Student Contact

- Time (too many groups, too little time)
- Student behaviour changes in the presence of faculty
- Having sufficient faculty with real world experience of DBT projects (and associated skill sets)

TRIZ – Common Features of Good Solutions

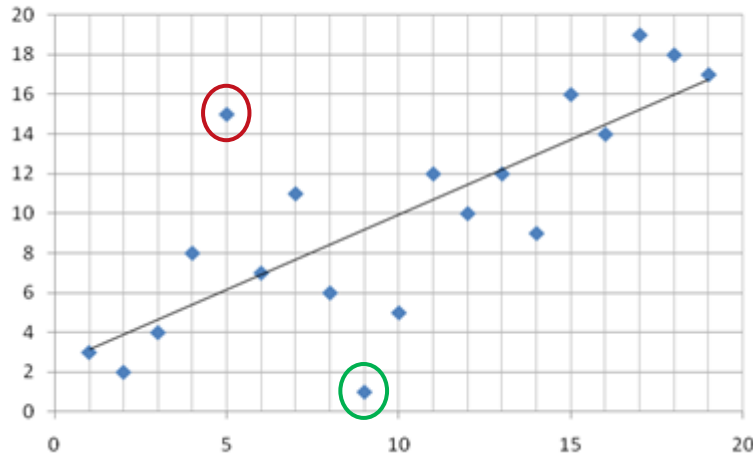
Easily available, idle resources are used



DBT Project idle resources = Students

Student Input – Peer Ranking

Performance (x) v Preference (y)



By the end of year 2 all students will have worked with all of their cohort on at least one DBT project.

Confidentially rank all the students in their cohort for preference as a partner for the capstone project in year 3.

	Rank	18	19	5	12	14	4	3	15	8	6	11	1	17	9	12	7	10	16	2
ADOLPH, Cassie	10	11	18		1	8	7	6	3	2	12	13	4	16	14	9	10	15	15	5
ADOLPH, James	11	14	18	1		7	2	13	9	6	8	17	5	15	11	16	10	3	12	4
ADOLPH, Andrew	16	15	18	8	7		6	5	17	11	4	10	2	14	9	13	3	12	16	1
ADOLPH, Lauren	3	14	15	10	11	12		7	17	16	1	9	4	18	2	8	6	3	13	5
ADOLPH, Sarah	1	14	17	9	15	13	4		11	3	1	16	2	18	8	10	7	6	12	5
ADOLPH, Aaron	5	16	18	3	6	14	12	1		5	4	9	2	8	15	17	7	11	13	10
ADOLPH, Avaella	4	18	16	2	12	11	10	1	15		6	9	3	17	5	8	4	13	7	14
ADOLPH, Robert	8	17	13	10	11	12	1	6	15	14		8	3	18	2	9	7	4	16	5
ADOLPH, James	7	14	17	7	13	15	6	3	12	1	11		2	16	10	9	5	8	18	4
ADOLPH, Anna, Rosevelt	9	16	18	8	15	14	2	3	10	5	4	13		11	6	12	9	7	17	1
ADOLPH, Nathan	19	18	16	13	5	6	15	7	2	14	8	1	9		12	3	11	10	17	4
ADOLPH, Christopher	14	16	18	4	9	17	1	10	15	6	7	8	5	13		12	2	11	14	3
ADOLPH, Corbin	13	17	18	12	16	15	7	13	14	3	1	6	5	8	9		4	13	10	2
ADOLPH, Brian	6	13	18	10	11	12	2	3	14	7	6	5	4	16	9	15		8	17	1
ADOLPH, James	12	17	18	4	11	10	1	8	13	12	5	9	2	15	6	14	7		16	3
ADOLPH, Kevin	15	18	6	2	9	10	11	1	17	3	14	12	7	16	8	4	5	13		15
ADOLPH, Tim	2	16	18	3	11	13	2	5	10	9	4	12	1	17	6	14	7	8	15	

Student Input Peer Assessment

Based on a zero mean contribution, each student scores themselves and all other members of the group in each of fifteen categories, which are aligned with the deliverables and learning outcomes of the project.

Technical Contributions						TOTAL
Ability to apply technical knowledge from other modules (including stages 1 & 2) to project	0.5	0	0	0	-0.5	0
Contribute alternative design concepts	1	0	-3	4	-2	0
Sourcing of relevant technical information	-0.4	1.5	2.5	-1.3	-2.3	0
Demonstrate an ability to apply critical thinking	-1	1	2	-1	-1	0
Effectively troubleshoot problems and find answers	-0.5	1.5	0	0	-1	0
SUB TOTAL	-0.4	4	1.5	1.7	-6.8	
Contributions to Deliverables						
market research	1	2	3	-1.5	-4.5	0
Preparation for interim group presentation	-0.5	1.5	3	-1.5	-2.5	0
Writing of interim group report	2.1	4.7	2.2	-4	-6	0
Construction of concept prototype	-3.5	1.5	-1.5	0.5	3	0
Design (sketches, CAD etc.)	-2	4	-3	6	-5	0
SUB TOTAL	-2.9	13.7	3.7	-0.5	-14	
Collaboration						
Effectively takes charge of tasks assigned	1.5	1.5	2.5	-1	-4.5	0
Is fair and even in the treatment of ideas/solutions put forward by other group members	-2.5	1	0.5	0.5	0.5	0
Produces work on time	2.25	4.25	4.25	-3.75	-7	0
Willing to take on tasks	1.5	1.5	2	-2	-3	0
Communicates clearly with other members of the team	-2	1.5	-0.5	1	0	0
SUB TOTAL	0.75	9.75	8.75	-5.25	-14	
GRAND TOTAL	-2.55	27.45	13.95	-4.05	-34.8	

Peer Input - Caveat

Kruger, J., & Dunning, D. (1999).

Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments.

Journal of Personality and Social Psychology, 77,
1121–1134.

Student Input – Online Collaboration

Google Groups:

- Free private groups (by email invitation only)
 - Threaded discussion forum (blog)
 - Shared file space
 - (Tutor) rating mechanism
 - Email notifications (instant / daily digest)
 - Posts can include embedded hyperlinks
-
- Weekly CA – quality and volume
 - Instant feedback (* ratings, posts)
 - Useful tool for students and assessors

Online Collaboration example

Groups [Images](#) [Directory](#) [Web](#) p.hermon@qub.ac.uk | [My Groups](#) | [Favourites](#) | [Profile](#) | [Help](#) | [My Account](#) | [Sign out](#)

Google groups

0910-QUB-PDD-MEE3052-M2 Search this group Search Groups







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[peer-M2-MEE3052-0910-s2.xls](#)
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Group info

Members: 6

Language:

Group categories: *Not categorised*

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Group Leader Rôle

- Weeks 1-12; each student gets equal time as leader
- Week 13; feedback of tutor observations and peer assessment via individual interview
- Weeks 13-24; regular secret ballots (ranked list) to elect leader every 3-4 weeks
- Weeks 16-18 parallel seminars on building effective teams, delivered by external practitioner.

Observations (Issues)

Nullius in verba (take nobody's word for it). Caveat on the reliability of peer assessments and the “above average” syndrome.

Ganging up / bullying is a possibility in peer assessment

Limitations of Google Groups. Better in the research than prototyping phase

Subjective nature of the assessment of these skills

Limited relevant experience of faculty

Observations (Successes)

Improved understanding of student abilities beyond academic knowledge

Better alignment of assessment with learning outcomes

Information was gathered from students about their peers that is not easily obtained otherwise in a time efficient manner

Questions?