LEARNOVATE
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Research Integrity and Impact in an Open Scholarship Era

- PG Survey/Student Responses

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TECHNOLOGY CENTRE
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Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

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Introduction

Funded through The National Forum for the Enhancement of Teaching and Learning and based upon feedback from Trinity schools and students, 'Research Integrity and Impact in an Open Scholarship Era' – an existing module for incoming doctoral students – will be redesigned from a pedagogical perspective and rebuilt from the ground up, making it applicable across multiple disciplines and contexts. In partnership with students and faculty stakeholders, the new mandatory wholly-online 5 ECTS module will be contextually embedded while maximising the value of shared disciplinary good practice. Enhanced with relevant content and inclusive, interactive assessment practices, the module will radically transform the student user experience.

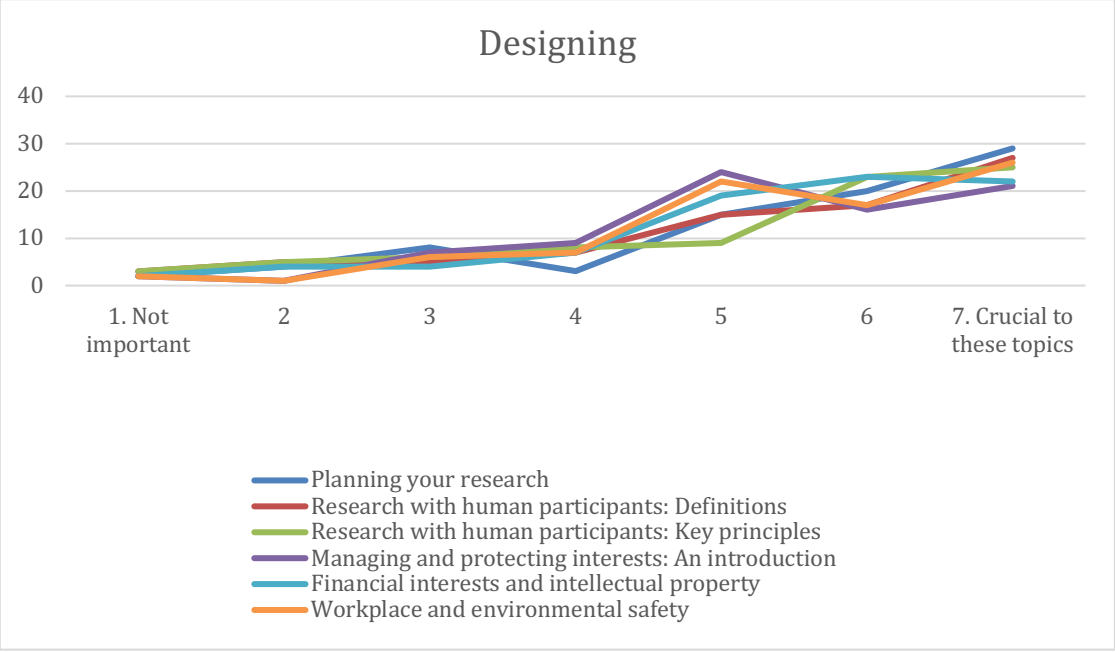
Learnovate are working with Library Services and the wider Trinity College Dublin community on this project. To re-design and co-create the module a structured innovation approach is being deployed to understanding the needs of all stakeholders in the module including PhD students, Post Graduate Directors and Tutors.

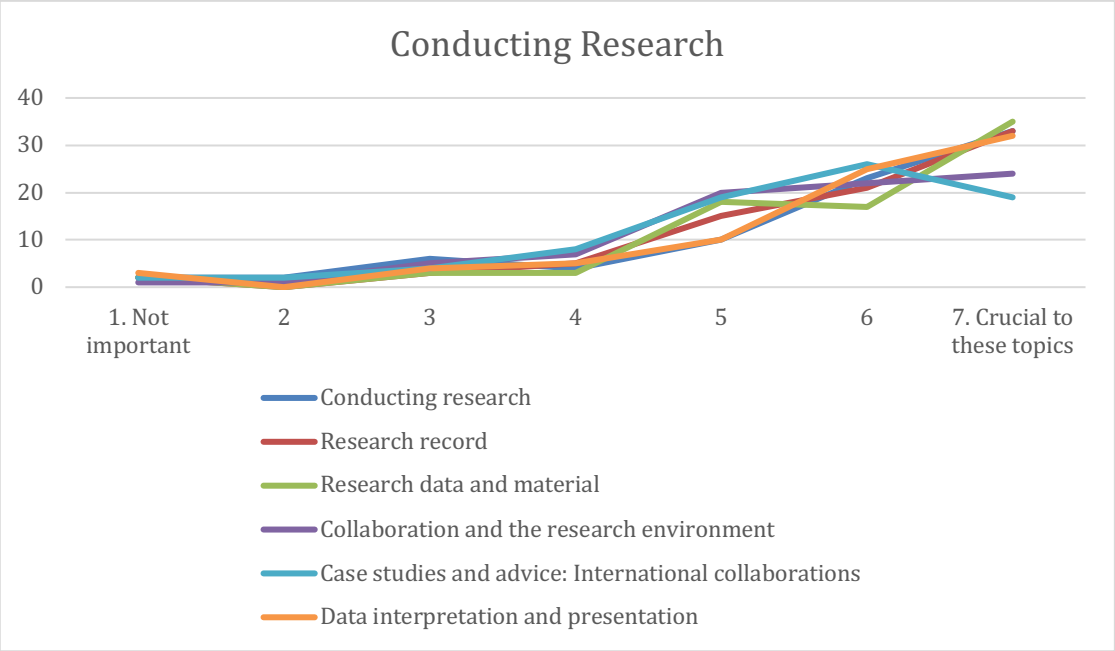
As part of this process we have sent out three surveys, the results of one of the surveys are captured in three documents. The synthesis of findings across the three documents is contained in the separate Survey Analysis Report.

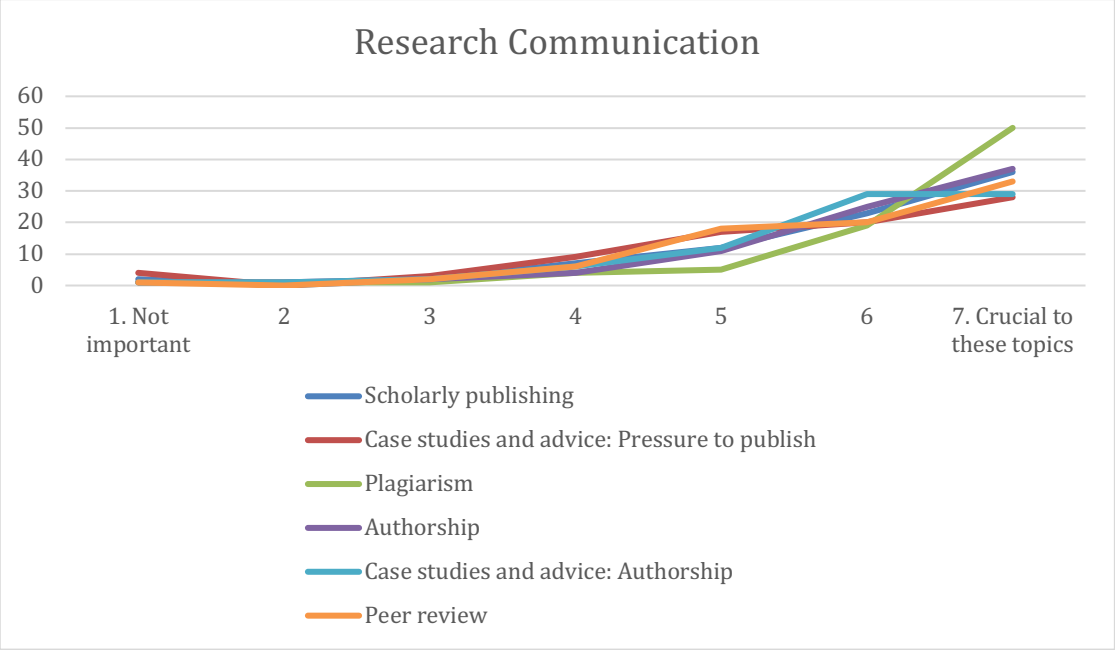
Survey Results

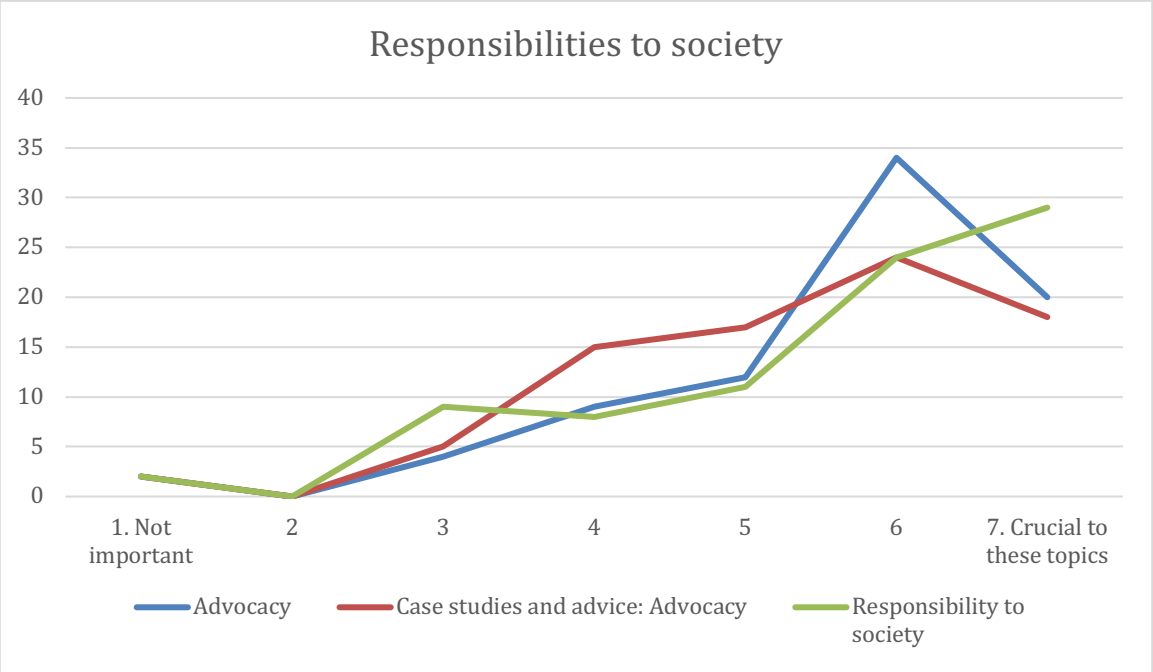
1. Research Integrity.

1.1 The Research Integrity topics in the Epigeum course that is currently incorporated in this Module are listed below. Based on your views on their value to PhD students, please rate each subtopic from '1 Not important' to '7 Crucial for these topics'




Conducting Research
40
30
20
10
0
1. Not important
2
3
4
5
6
7. Crucial to these topics
Conducting research
Research record
Research data and material
Collaboration and the research environment
Case studies and advice: International collaborations
Data interpretation and presentation


Research Communication
60
50
40
30
20
10
0
1. Not important
2
3
4
5
6
7. Crucial to these topics
Scholarly publishing
Case studies and advice: Pressure to publish
Plagiarism
Authorship
Case studies and advice: Authorship
Peer review



1.2 Are there any other areas you feel should also be included in the area of research integrity and ethics?

Twenty six respondents indicated ‘no’ or ‘not applicable’.
Other suggestions were:

- Data analysis and management for research
- qualitative and quantitative approaches to research
- Imposter Syndrome, Opportunities and challenges during the PhD supervision: Supervisor and Student's perspective
- Relationship between PhD student and supervisor
- Ethics of working remotely
- Future near and far term impact
- I believe that the module is already full of all the crucial aspects
- job hunting
- More detailed explanation of data transfer between countries.
- How to obtain fund for a research
- More specific input related to the different disciplines
- Multidisciplinary research
- Downsize the module please.

1.3 Are there any specific skills related to research ethics and integrity that you would like to see included on the course?

Twenty three respondents indicated ‘no’ or ‘not applicable’.
Realistically the suggestions below formed no clusters but provide a good view into skills students value:

- Academic analytical writing skills
- Capturing data online
- Conscious effort to innovate. Design thinking.
- Cultural differences
- Feed-backs to users at the end of research process
- Focus more on managing quotes and ideas for humanities and literature students. The focus in this was heavily toward scientific data.
- How to communicate concerns
- HOw to obtain ethics in a smart way. How to market for your research
- How to use different kinds of research softs
- Maybe : communication with collaborators
- Navigating public scholarship on social media, etc
- No - to be honest, I was really frustrated at having to take this module. It's pure box-ticking and frankly I have better things to be doing. Anything that was relevant to my field was common sense that I didn't need to be told after five years of study; most of the content was wholly irrelevant.
- No but the design of the module is not for people to learn but rather an exaggerated tick box exercise, these topics need a more personal input rather then computer videos
- No, downsize the module please.
- Not needed for non-ethical PhD programmes
- question deign when working with informants of different cultural groups
- related to conference presentations
- Research integrity in the midst of pandemic e.g. Data collection methods
- Skills covered in existing course sufficient.

1.4 Electives - The Research Integrity course serves students across all schools in College and is presented via 5 broad disciplinary options:

Research Integrity - Arts and Humanities (300 mins)
Research Integrity - Biomedical Sciences (300 mins)
Research Integrity - Engineering and Technology (300 mins)
Research Integrity - Natural and Physical Sciences (300 mins)
Research Integrity - Social and Behavioral Sciences (300 mins)

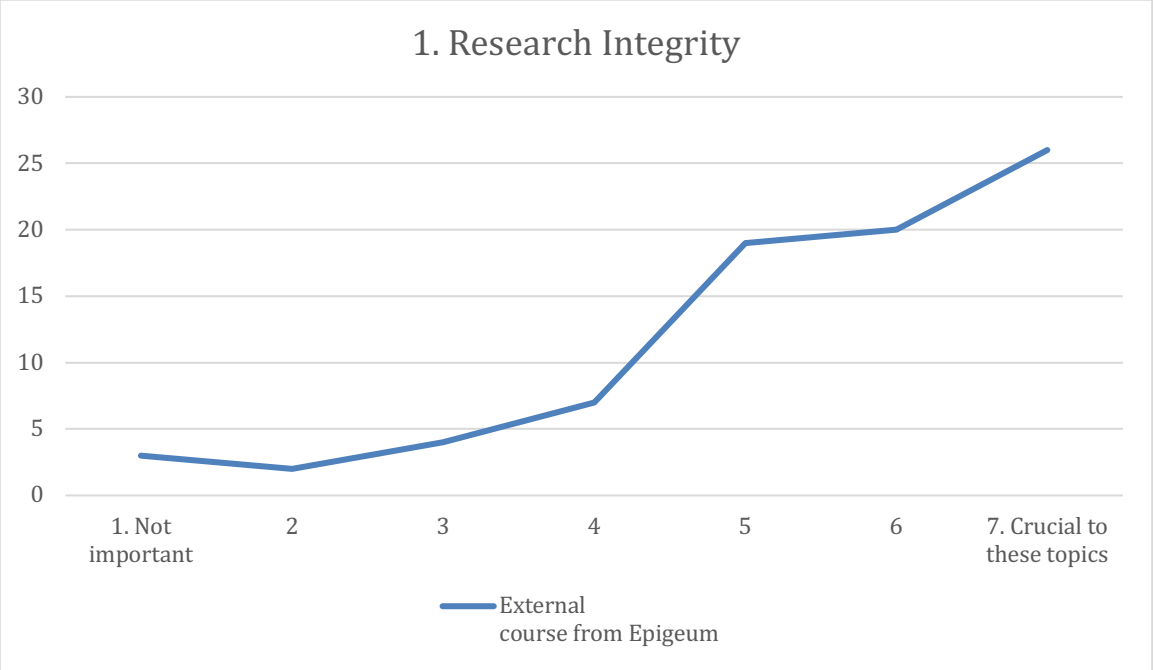
If the Research Integrity course was to offer electives to complement these disciplinary perspectives, are there any topics that would be useful for incoming doctoral students in your school?

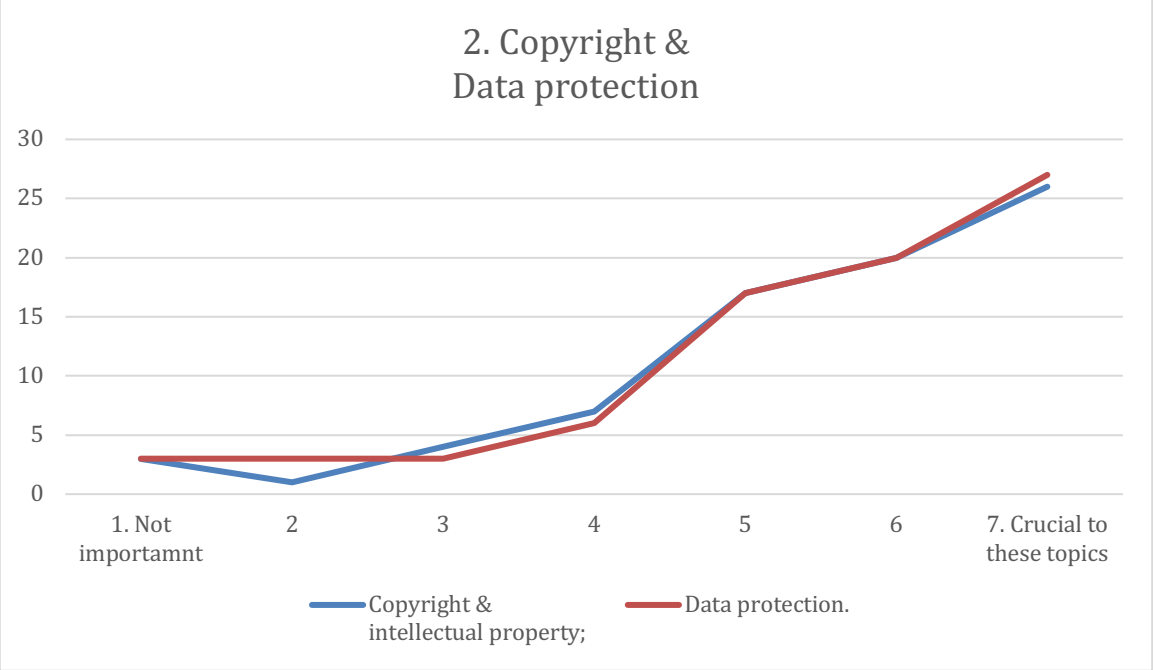
Eighteen respondents indicated ‘no’ or ‘not applicable’
Again as with 1.3 the suggestions below formed no clusters but provide a good view into skills students value:

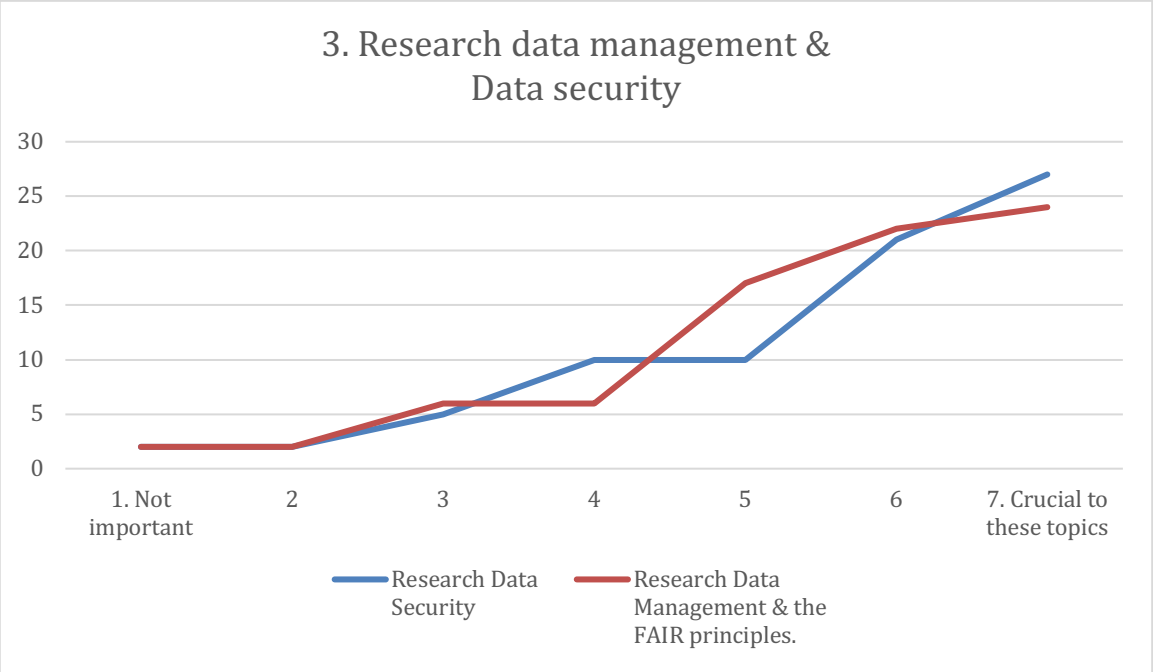
- All of them
- Beginning research and where to start
- Case studies specific to field.
- Data analysis and interpretation, interview skills in qualitative studies
- Engineering and technology
- How to publish efficiently.
- I felt like the Arts and Humanities option was "tailored" to AHSS by adding, every now and then, the assertion that this was relevant to AHSS but there wasn't a lot of proof of that. I would like to see content specifically about researching and citing ideas, about synthesizing theories, etc, to avoid plagiarism, specifically with these areas in mind where we aren't dealing with hard data.
- Legal Studies and Methodology
- Mareketing your research
- Maybe some electives in more particular topics, e.g. ethics of AI research, genetics research, presented by professionals in those fields
- multiculturalism
- PhD life-academic balance
- something like how to deal with others copy your own work
- Stress management
- The process of obtaining ethical approval in details

2. ‘Research Integrity and Impact in an Open Scholarship Era’ .

2.1 A list of the topics covered by the module are listed below. Please rate each topic and subtopic from '1 Not important' to '7 Crucial to these topics’






3. Research data management & Data security
30
25
20
15
10
5
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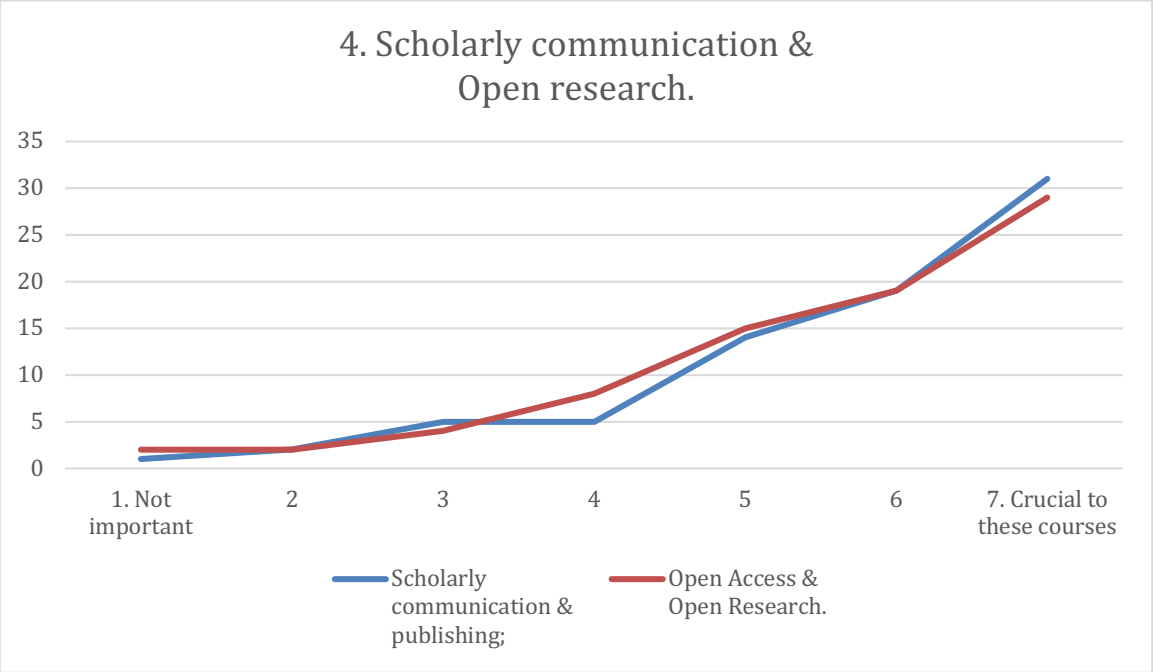
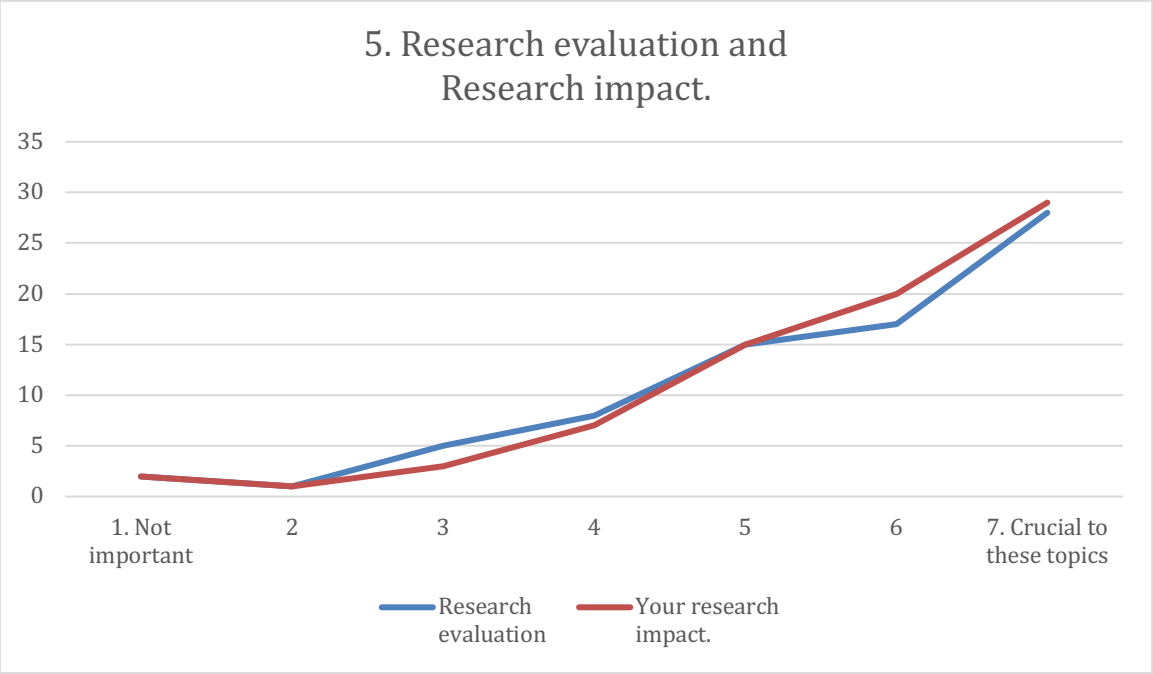
1. Not important
2
3
4
5
6
7. Crucial to these topics
Research Data Security
Research Data Management & the FAIR principles.


4. Scholarly communication & Open research.
35
30
25
20
15
10
5
0
1. Not important
2
3
4
5
6
7. Crucial to these courses
Scholarly communication & publishing;
Open Access & Open Research.



2.2 Are there any other topics you feel should also be included in this module?

Twenty four respondents indicated 'no' or 'not applicable'

- How to connect results with true evaluation
- minimizing environmental impact of research
- presenting constraints to research integrity

2.3 Are there any particular skills that you would like to see supported by the module?

Twenty four respondents indicated 'no' or 'not applicable'

- Analytical
- It might no be the right place to report this, but for wet-lab based PhDs, it would be useful to have a module for teaching the correct usage of statistics when interpreting data. Lots of us worry about doing stats wrong, and in tandem with this module, I would worry for myself that if my stats are wrong, could someone call it out as misinterpretation of data? Maybe even plagiarism?
- Maybe : communication with collaborators
- Perhaps field-specific skills.
- Support for individual writings, not online teaching like this module..

2.4 Are there any other features or enhancements that you would like to see included in the module?

Twenty four respondents indicated 'no' or 'not applicable'

- giving examples of researchers that have followed integrity in their researches and their outcomes
- Honestly, the module was too long. A lot of the topics covered are best learned in practice while conducting research, and it is my opinion this module should give a

more basic outline, a stepping stone to researchers considering these topics in their work so they can seek out advice/information as they need it. It would be more beneficial, to significantly reduce the content of the module, and provide an open resource with information that can be accessed at any time should the need arise.
- Less focus of human participants
- Some of them felt quite redundant and I forgot most of the things soon after I finished the test. Imho, the courses would be much more beneficial if the content was cut down and only important points are kept.
- The quizzes at end of each section could be a little easier.. challenging to find some answers and some errors within the quiz.

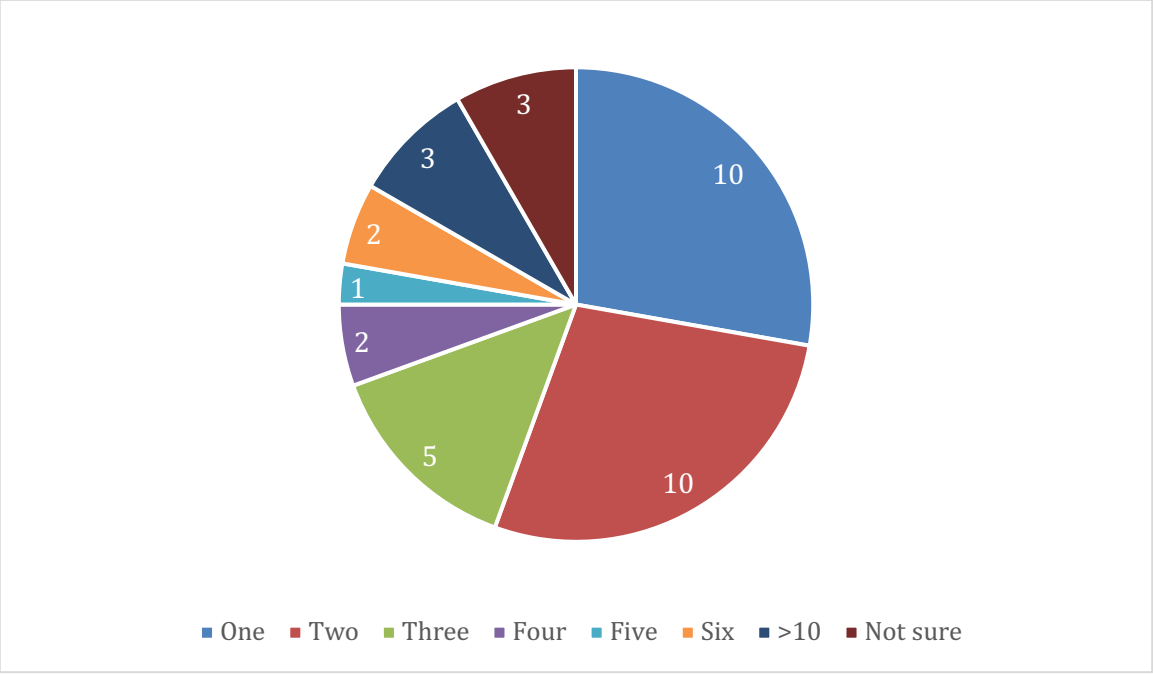
3. Module Timing

This 5 ECTS-credited module currently enrols in September/October each year. Candidates are self-directed to complete the course over the following 18 months. This may be changed to be more aligned with standardised College and school practice. To help with this, we'd like to know more about other taught modules offered by your School.

3.1 Does your school run other taught modules at this early stage of the Structured PhD?

Yes = 56, No = 23.

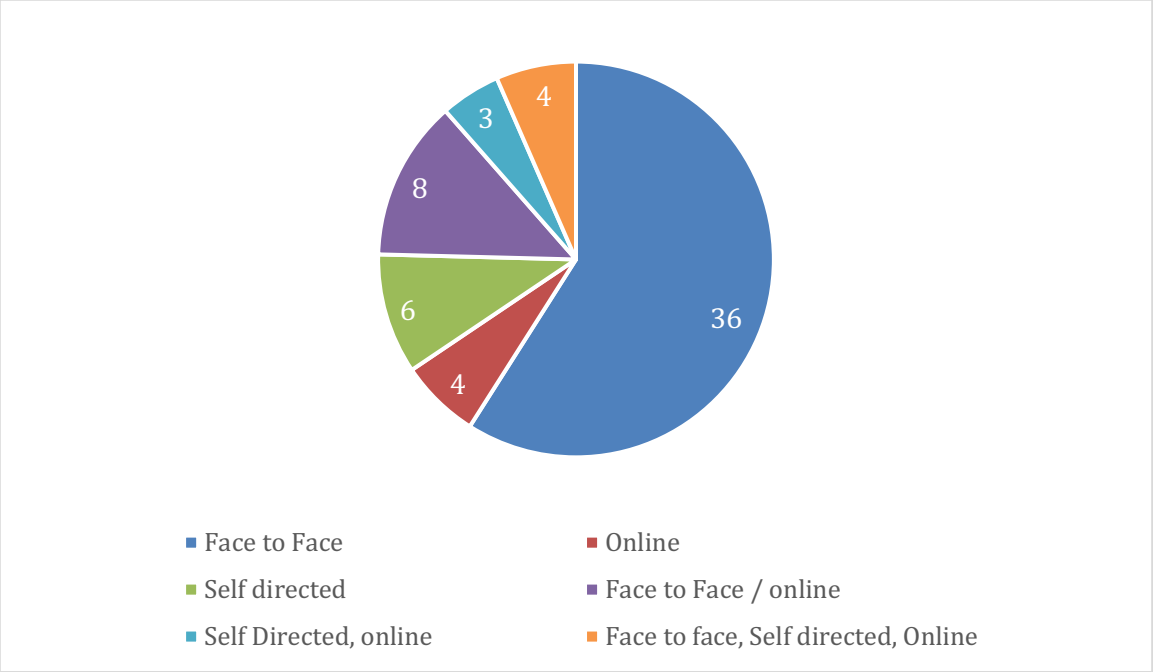
3.2 If yes, how many?



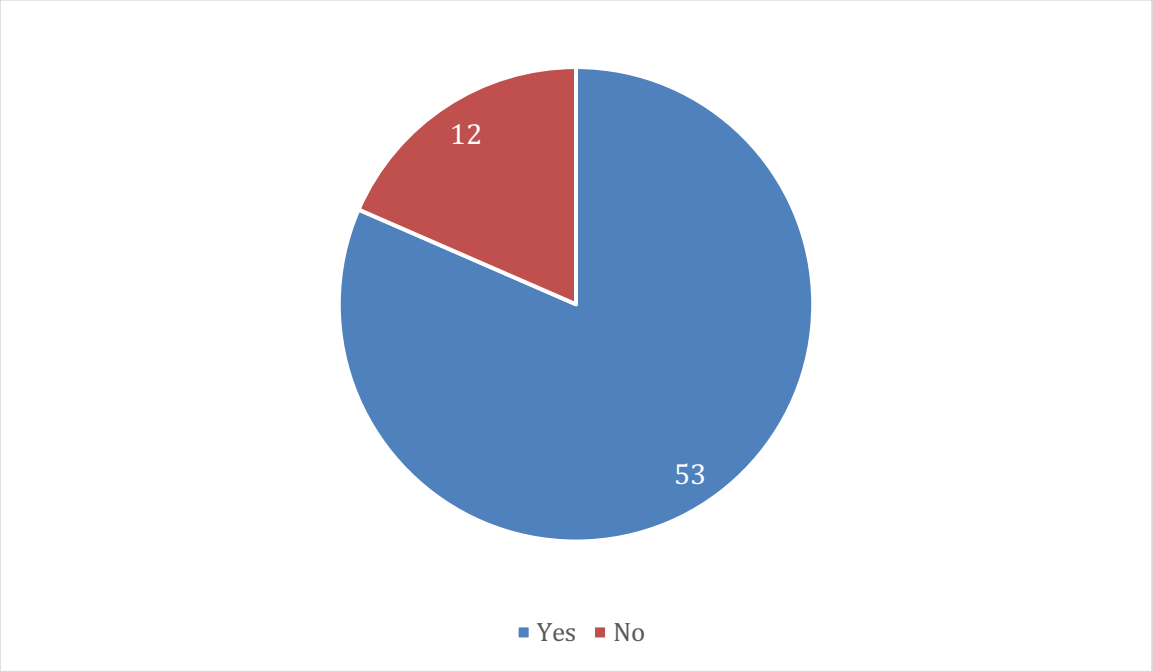
Comments:
- 10 credits
- 10+

- 15 ECTS in total (including this Research Integrity module); 1 other mandatory 5 ECTS module on Research Methods
- 5 ECTs
- ALL
- As many as you want to take
- Full courses (e.g. Econometrics, Microeconomics, Macroeconomics) and Field courses (e.g Political Economy, Development...)
- In total we should have 30 credits done in 4 years, 15 credits complete by end of 2nd year
- Many
- Many, and we have to attend 3.
- up to 15 optional modules most student probably do 1-5 in their first 18 months
- Up to 30 ECTS

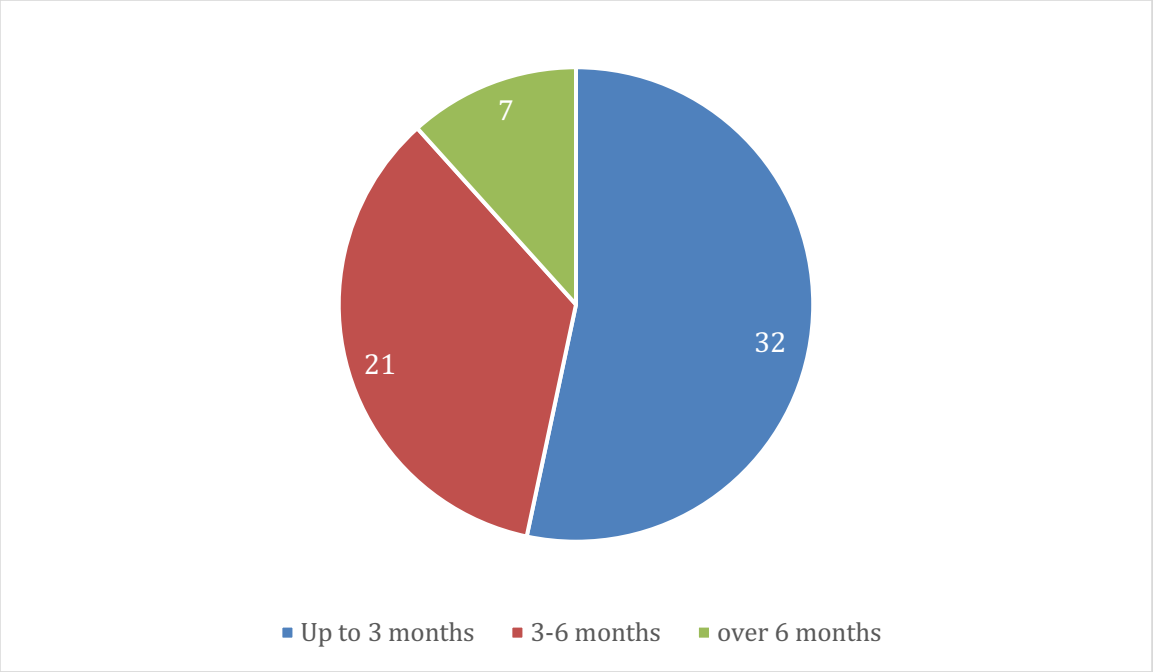
3.3 How are they delivered?



3.4 Are they formally assessed?



3.5 Typically how long are these modules?



4. Module Engagement

Online courses can pose challenges for students in many ways, including engagement, assessment methods and motivation to complete on time. Could you provide any insights as to what you have found works well in each of these areas? A brief comment on each is all we require at this stage.

4.1 Student Engagement in online learning.

All responses are in Appendix I
In these responses the students focused on the Research Integrity and Impact in an Open Scholarship Era rather than their experiences on other courses.
The main themes that arose from the responses were;

- **Good** (9). Many students were happy with the course "*student engagement was better than my previous experiences with online self directed modules*"
- **Needs a lot of time** (6). In different ways students felt the course required a lot of time and difficult to carve that time out "*Time consuming*"
- **Blended** (6) The concept that the course would be better if some blended aspects were introduced "Online classes and learning are fine but there still needs to be a personal element to them"
- **Poor Engagement** (5) The current delivery method is not seen as engaging enough, "*not really engaged*"
- **Design** (4) Some redesign of the learning material was believed might help "*more of graphics and audio then text will engage students more*"
- **Video use is seen as positive** (3) "*the online videos are great to go back if we missed something*"

4.2 Assessment in online teaching and learning

All responses are in Appendix II
Referring to the Research Integrity and Impact in an Open Scholarship Era module three main clusters emerged in relation to the current model of assessment

- **Working well** (12). Ranging from very good to fair the largest group seem happy with the assessment as is, "*Very effective in terms of learning. It shows result immediately and we can cover topics again in*"
- **Scope for improvements of current assessment** (11). Feedback was around clearer guidelines and some issues "*some of the questions had different answers to the classes so some fine tuning of the questions and answers are needed*"
- **New methods needed** (8). It was felt the assessment was difficult and time consuming "format seemed a bit random and possibly not the best way of assessing the module".

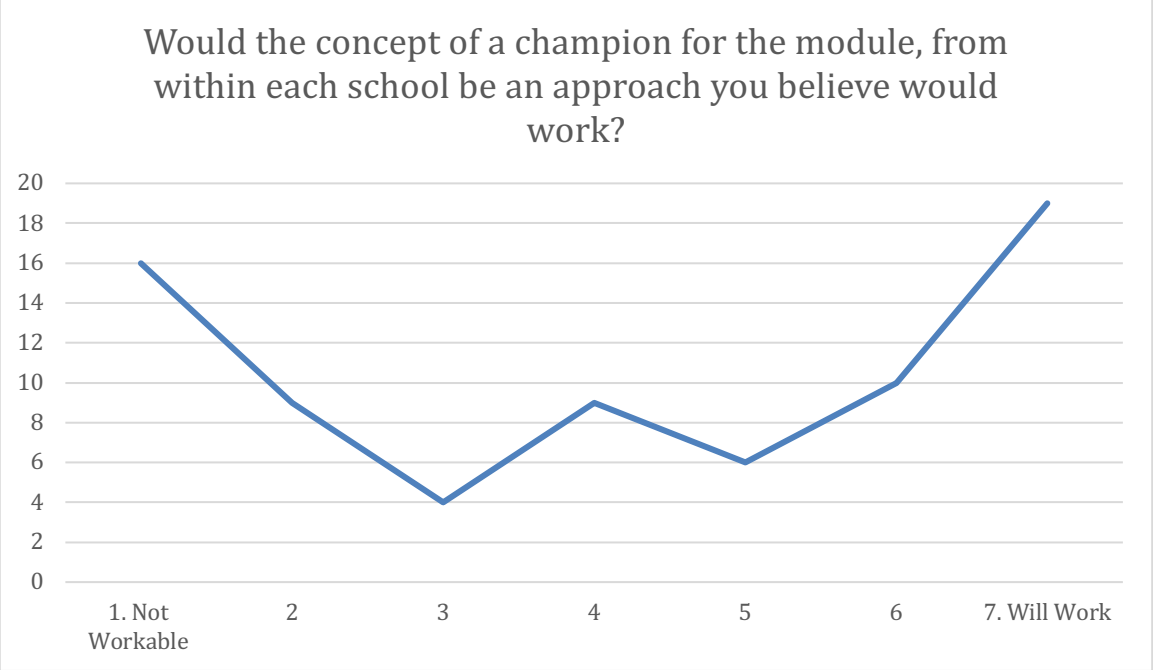
Some alternatives suggested were; essays, quizzes and no assessment.

4.3 Motivation for online self-directed learning.

All responses are in Appendix III
Again we see support for the current course in terms of motivation and some good suggestions to improve motivation.

- **Good as is** (11). Positive feedback, at phD level self-directed should not be seen as a challenge, "*very motivating since we can apply it on our work*"
- **More structure** (5). It was felt the course could improve with some structure around timings and deadlines, "*Clear timelines that are communicated effectively at the start of the course would help students complete the course in a timely manner*".
- **Shorter blocks** (3)**.** "*Well designed content, nice interface and relatively short blocks of work*"
- **Lack of motivation** (4). *"Hard to be motivated when you know what you're doing is a long waste of time"*
- **Lack of contact (3).** "*sometime hard to get motivated and not strongly get connected to the module because the face-to-face and interactive discussion with the lecturer and classmates is absent*".

4.4 As a college-wide course, awareness of, and engagement with, the module at school level can be difficult to maintain.



If you wish, please provide some detail for your answer.

- A Champion to seek expert advice, to guide or seek direction, to express concerns or to voice opinions. In other words, a bridging gap between the Supervisor and the Student.

- I am not sure.
- I don't understand this question
- I felt like so much of this module, especially the Epigeum section, was of no use to a literary researcher. Having someone to remedy that would make it easier to engage with the module.
- It may not be able to fix the cause why students can't get engaged as much as in the class conducted in face-to-face mode.
- Nobody in the microbiology really knew about this course. Myself and two other incoming PhD students at the time had to tell our supervisors about this mandatory module. It would be useful if they knew a little more about it. Perhaps if they were told about it on a school level? Maybe they know about it now, but back in September 2018 they didn't really have a clue.
- please just cancel this course - if it's necessary for legal reasons, make it MUCH shorter
- Some or other research involved in all courses
- The students will be more interested and more serious
- Very useful to have module representative in each school.

5. Opportunities and Challenges

5.1 The areas covered by this module are part of a continually developing field related to best practice and legislation. In your opinion can you think of any emerging or future elements to be considered in the re-design of this module?

EXTERNAL - National, European or International

- Differences in legislation in different countries perhaps.
- Effectiveness of data protection in order to mitigate the risk of cybersecurity or data loss events.
- May need to reinforce international cooperation, especially with developing countries.
- More focus on difference in regulations and best practices in different countries
- Research during the pandemic from a international perspective
- Research Mentoring
- The world is constantly changing, therefore is very hard to see it ahead.

INTERNAL - School and College

- Parts of the module that are irrelevant to the School or PhD Discipline can be omitted
- Tailored more to school/college.
- Less emphasis on human participants for those that will not be using them
- Making it shorter and more relevant to each school

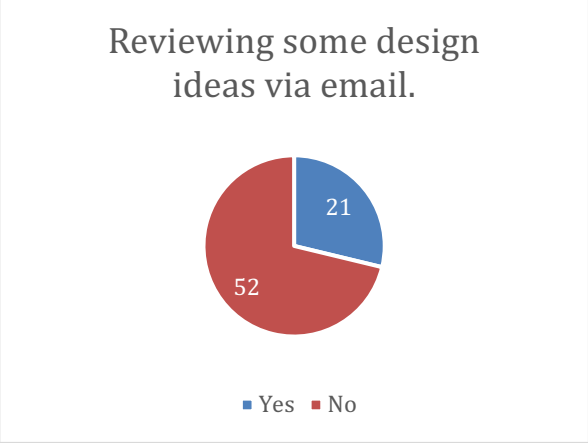
- Virtual or Blended approach to teaching-learning
- interaction with lecturer/ teaching assistant/ classmates by online seminar
- More videos and online tutorials
- Research Mentoring

- Business School
- Computer Science and statistics
- More co-operations as well.

- Currently the topics cover the needs.
- The slides are borrowing (*boring?*). It's a hard subject for students to take on and every presenter (except IT sections) read the words from the slides, as students we get ridiculed when we do that!! There was no teaching element in that module at all - just go do some reading and get back to us. Also the quizzes weren't even programmed properly and sometimes had to input wrong answers to progress. Utter shambles esp when TCD goes on about how great it is! I had to keep re-doing 1 quiz 8 times before I could pass. A complete waste of my time!

6. Co-Creation

We are committed to developing a world class course to support all of our students on the Structured PhD programme. The redesign work on this module will continue till late 2020. We would be very interested in developing the course with input from staff members like you. Would you be interested in contributing to the design by:



Appendices

Appendix I
Q4.1 Student Engagement in online learning

Feedback

Good (9)

- Good
- good
- Good alternative method
- Good that it can be done in your own time
- Engaging and focused
- It's very well-designed that we have some interactive activities in this module.
- Yes
- student engagement was better than my previous experiences with online self directed modules
- Students probably engage more with onine learning, as it is a more comfortable environment for them and they might feel more free to ask and answer questions than they might if it was a face-to-face class.

Needs a lot of time (6)

- Time consuming
- Tough to priorities when other work is there to do
- A bit hard to concentrate to find quite and silence place. Other than that very interesting way of learning.
- Long and complicated courses done online makes students feel overwhelmed at the beginning and tends to frustrate students.
- some videos/topics are very long

Blended (6)

- Regular classwork is needed
- I prefer face to face learning method
- I rather a more dinamic, it could make it more attractive and the engagement would be better.
- Online classes and learning are fine but there still needs to be a personal element to them, the above modules are very clinical and disassociated from the participants
- Have a mixture of live and prerecorded lectures
- including discussion forum

Poor Engagement (5)

- Doesn't work well.
- not really engaged
- Difficult to achieve
- Minimal engagement
- less than in face-to-face classes. It depends on the student motivation to learn

Design (4)

- More of graphics and audio then text will engage students more. Some sort of incentive can help.
- Shorter courses with maximal video and quiz features and minimal heavy text paragraphs
- The supply of well thought-out and designed study materials makes i easier for students to engage.
- Better to have shorter more regular deadlines for completing sections, with regular reminder emails to help students stay engaged

Video use is seen as positive (3)

- Videos were helpful
- Easy to follow and the online videos are great to go back if we missed something
- If its recorded then its easy to watch again for better understanding.

Others

- Absolutely necessary.
- Adequate information about module structure etc.
- Discussion Groups
- Flexibility helps the student to engage more in the module
- Found that the online course could be reading heavy.
- Have not completed the course yet
- It is difficult without any interactions with other people.
- More practical examples when teaching
- N/A
- Online learning encourages planning, crucial element in research design.
- the depends on the reason the student is there.
- The layout of the course was ridiculous and chaotic. It was also totally unclear whether Epigeum was ll there was, and it was hard to access the other bits and navigate them on Blackboard.
- They will be more familiar with that.
- very well

Appendix II
Q4.2 Assessment in online teaching and learning

Working well (12).

- fair
- fine
- Good
- good
- Very effective in terms of learning. It shows result immediately and we can cover topics again in
- very good
- The assessments are engaging and great
- Worked really well.
- Works well
- Yes
- Type of assessments was pretty good and was designed for learning not just marks and passing
- perfect assessment

Scope for improvements of current assessment (11).

- Better to have shorter more regular deadlines for completing sections, with regular reminder emails to help students stay engaged
- Being clear about how assessment will be delivered and following through.
- It may be a little over-simplified by only having multiple choice for assessment.
- No clear guidelines for this job.
- description of answers
- Need to be developed
- The answers to questons in the assessment should match the answers to the same questions in the practice quizzes.
- Useful to review weakness points.
- Online mcqs were fine, however some of the questions had different answers to the classes so some fine tuning of the questions and answers are needed
- Clear communication of deadlines etc.
- Use MCQ rather than fill in the blanks, Don't make blanks case sensitive

New methods needed (8).

- Should be easier.
- Very bad. The exam pass mark at 80% is simply ridiculous and leads to frustration
- Very demanding
- Class participation has impact on assessment but its difficult to assess student in online learning.
- Time consuming
- Assessment becomes more complicated
- The multiple choice format seemed a bit random and possibly not the best way of assessing the module. But it wasn’t a big issue
- Can be off putting for the student

Other Comments

- Do not have blackboard access
- I think very similar to the face-to-face exams. Also in this case, it depends a lot on the student behaviour
- interactive and meeting the learning outcomes
- Maybe more essay-type assessments

- most students are doing it because it is mandatory
- online quizzes with quick feedback
- There should be no assessment for this - I am here to do a PhD, not to look at slideshows and answer questions like a close test
- They will be more familiar with online assessment.
- N/A (x4)

Appendix III
Q4.3 Motivation for online self-directed learning

Good as is (11).
- Firstly it was credits but afterwards I found it very interesting and did most of the online topics available.
- As an international students there was some new information regarding regulations and services that was necessary for me and it motivates me to complete this module and mode of learning was really great and flexible especially during pandemic
- Good
- good
- good
- Yes
- very motivating since we can apply it on our work
- Self-directed learning is fully part of a PhD work
- It's Interesting
- They will be motivated.
- Very much related to the topic - works well for me

More structure (5).
- Clear timelines that are communicated effectively at the start of the course would help students complete the course in a timely manner.
- Schedule the course in 2 deliveries
- setting a regular time to work on the module, keeping in mind the reason for taking the module.
- Setting of deadlines, weekly meeting with Supervisor especially with part-time students, progressive accomplishment of the goals, encouragement with mutual respect and cooperation rather than being authoritative
- Because you have so long to finish the module, it is difficult to prioritise it. But also good to have flexibility.

Shorter blocks (3).
- Well designed content, nice interface and relatively short blocks of work
- Better to have shorter more regular deadlines for completing sections, with regular reminder emails to help students stay engaged
- If done in small pieces the module is easily managable.

Lack of motivation (4).
- I feel its less motivated
- No
- Minimal motivation
- Hard ot be motivated when you know what you're doing is a long waste of time

Lack of contact (3)
- Need more interaction and supervision.
- sometime hard to get motivated and not strongly get connected to the module because the face-to-face and interactive discussion with the lecturer and classmates is absent.
- tough to stay motivated with no personal element

Others
- Clear and concise topics.
- completion status
- Credits
- Depends on the student

- if you are motivated for face-to-face learning, you should be motivated as well for online self-directed learning
- Motivation was driven primarily by deadlines
- Need to be developed
- Promoting research abilities
- Publicity via the department and faculty so that students can be aware
- Recommend students to read more online materials
- Respect the deadline.
- Tasks to complete