



September 2022

Introductory statement

You are being invited to take part in the research project titled “**Using Learning Analytics to Aid Student Success**”. This research is being conducted by Claire Mullen, PhD student in the UCD School of Mathematics and Statistics, and Dr Anthony Cronin, Assistant Professor at the UCD School of Mathematics and Statistics. Before you decide to take part it is important you understand why the research is being conducted and what it will involve. Please take the time to read the following information carefully.

What is this research about?

Since March 2020 secondary schools and other places of education have experienced repeated closures and disruption due to the COVID-19 pandemic. This study is focused on: early identification of students who may be at-risk of under-performing in their mathematics modules due to the disruption of their previous education; and on implementing targeted interventions to support such students. The study will involve a survey about your previous experience of the mathematics subject as well as a mathematics proficiency quiz to gauge where you are mathematically as you start your university mathematics learning.

Our research questions are:

1. What areas of improvement, if any, can be identified in incoming students’ mathematics proficiency based on the results of their proficiency quiz?
2. For those identified for follow up interventions, what worked best in terms of engaging students with mastery learning?
3. In what ways do students choose to interact with various maths support measures when participating in a first-year mathematics course?
4. What learnings around promoting independent study practice e.g. resilience, can be gained as a result of this study.

We are interested to see how differences in students’ approaches to learning, and/or prior mathematical achievement affects their engagement with online mathematics support resources. Students’ views on the differences between online learning versus traditional face-to-face support are also of interest.



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How will my data be used?

The de-identified results from your proficiency quiz will be used to identify students potentially at risk of underperforming in their mathematics module and to advise on follow on supports. Further insights from examining Brightspace and Bolster Academy engagement metrics (e.g. downloads, clicks, videos watched) and results from early continuous assessment components may also be used to contact you if you are deemed at risk of falling behind in the module.

Why have you been invited to take part?

You are invited to participate in this study because you are enrolled in a Stage 1 mathematics module at UCD in the 2022/2023 academic year.

What are the benefits of taking part?

As part of this research you may be contacted with advice on how you might improve your chances of success within this mathematics module e.g. visit the UCD maths support centre, take an online class, advice on which resources/videos to view etc.

Are there any risks associated with taking part?

There are no foreseeable risks associated with taking part in the study. Taking part in this study is voluntary and will not affect the grades you achieve. It will also have no impact on any of your other academic activities, and these data will not be shared with anyone else or used by the School or University for other purposes.

Do I have to take part?

No – participation is voluntary, it is entirely up to you. You can still receive the full percentage of continuous assessment available for participating in MathsFit without consenting for your data to be used in the research.

Can I change my mind at any stage and withdraw from the study?

Yes of course, if you do decide to take part, you can decide to withdraw at any time or refuse to answer any question without any consequences of any kind. You can withdraw permission to use data from your survey responses up to the end of the study, in which case your survey will be deleted. A decision to withdraw, or not to take part, will not affect you in any way.

What will happen if I decide to take part?

You will be asked to take an online proficiency mathematics quiz and answer a number of survey questions regarding your mathematical background.

The questionnaire will take place online. You should feel comfortable to respond to the questions honestly and you will not be identifiable from the data you provide. The questionnaire should take around 5 minutes to complete. While we do ask for you to



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provide your student number so that the results of the proficiency test may be attributed to you in case of follow up guidance or interventions, your responses to this survey will have no effect on your results for this module, nor will it affect your relationship with your tutors or lecturers. It will also have no impact on any of your other academic activities, and these data will not be shared with anyone else or used by the School or University for other purposes.

How will your privacy be protected?

Your data will be processed in accordance with the General Data Protection Regulation 2016 (GDPR) and the Data Protection Act 2018. All information collected about you will be kept strictly confidential and secure. Your data will only be viewed by the research team. All electronic data will be stored on a password-protected computer file. If your data is used for research purposes it will be anonymised. Following the completion of the study all data relating to your participation will be archived and/or destroyed. If you choose to withdraw from the study your data will be destroyed immediately.

What will happen with the results of this study?

You can contact one of the research team who will be able to speak to you about the results of the study. The results of this study may be summarised in published articles, reports and presentations. Quotes or key findings will always be made anonymous in any formal outputs.

Contact Details

This research project has been approved by the Human Research Ethics Committee (HREC) of University College Dublin. If you are unhappy with any aspect of this research or have any questions about your participation, please contact either Claire Mullen or Dr Anthony Cronin using the details below.

If you have any concerns or complaints about the conduct of this research project, which you do not wish to discuss with the research team, you should contact the HREC team at hrec@ucd.ie

Claire Mullen:

Email: claire.mullen@ucdconnect.ie

Dr Anthony Cronin

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Informed Consent

By participating in this study you consent to: (1) your proficiency quiz score being used to identify any areas of improvement so that appropriate follow up maths support interventions or recommendations may be made; (2) your anonymous survey information to be used for research purposes so that insights on how to better support at-risk students may be found; and (3) your anonymous Brightspace and Bolster Academy engagement metrics (no. of downloads, views etc), including continuous and final module grades be used for research towards enabling student success.

Yes, I am happy to participate.

No, I would prefer not to participate.

Now you have read this information letter you can consent (or not consent) to participate in this study when you take the MathsFit pre-quiz survey.