

Plain language statement: Students

THE UNIVERSITY OF MELBOURNE

Melbourne Graduate School of Education



THE UNIVERSITY OF
MELBOURNE

PROJECT TITLE: Secondary and university mathematics: do they speak the same language?

Research Team:

Dr Caroline Bardini, A/Professor Robyn Pierce, Professor Kaye Stacey (Melbourne Graduate School of Education, University of Melbourne)

Introduction

Research, at secondary level, shows that mathematics symbols' conciseness and abstraction can be a barrier to learning. This project will explore the equivalent issue at the university level, when mathematics becomes more symbolic and its writing more subtle, requiring increased 'flexibility' from students. It will ascertain the impact on progression rates in mathematical sciences. The project's outcomes will include illustrated descriptions of similarities and contrasts between conventions and use of symbols in secondary and university mathematics and across mathematical sciences. It will provide evidence of links between students' response to increased symbolic load and their confidence to continue studying subjects with high mathematical content at university, thus grounding potential teaching action plans to smooth secondary-university transition.

This project has been approved by the University of Melbourne Human Research Ethics Committee and is funded by the Australian Research Council under the Discovery Projects scheme for 2015 (DP150103315).

What will I be asked to do?

Should you agree to participate, your online or hand-written responses to certain of your regular quiz or tutorial questions will be used for research purposes. In addition you will be asked to complete a survey for each topic during the semester (a total of 30 minutes in the semester). You may also be invited to participate in an audio-recorded interview (approx. 30 minutes). Survey, tasks and interviews are focused around some mathematics questions relating to the topics in your course and to your personal use of mathematical symbols.

How will my confidentiality be protected?

All reported information from this study will be aggregated or de-identified. In any publication related to this study, pseudonyms will be used and every attempt will be made not to disclose any identifying information.

The data will be kept securely in the Melbourne Graduate School of Education (MGSE) for five years from the date of publication, before being destroyed.

How will I receive feedback?

The project results will be hosted by the Australian Mathematical Sciences Institute web site during the project and for at least five years after the life of the project. It is also our intention to present the findings at the next Delta symposium on teaching undergraduate mathematics, the Mathematics Education Research Group of Australasia (MERGA) conference, the International Congress on Mathematical Education (ICME) and the International Group for the Psychology of Mathematics Education conference (PME).

Will participation prejudice me in any way?

Your participation in this study is completely voluntary and your participation or otherwise will not be noted for any purpose affecting your enrolment or assessment in any subject. Should you wish to withdraw at any stage, or to withdraw any unprocessed data you have supplied, you are free to do so without prejudice.

HREC: 1443452; Date: 23/02/17; Version: 2

Melbourne Graduate School of Education

100 Leicester Street | The University of Melbourne Victoria 3010 | Australia
T: +61 3 8344 8285 F: +61 3 8344 8213 W: www.education.unimelb.edu.au

Plain language statement: Students



THE UNIVERSITY OF
MELBOURNE

Where can I get further information?

For further information, or if you have any concerns, please do not hesitate to contact Dr Caroline Bardini on ph. 90353679 or email cbardini@unimelb.edu.au. Should you have any concerns about the conduct of the project, you are welcome to contact the Executive Officer, Human Research Ethics, The University of Melbourne, on ph: 8344 2073, or fax: 9347 6739.

How do I agree to participate? Completing an online survey will imply that you consent to your answers being added to our data for this study. For interviews or paper based surveys a consent form will be provided for you to complete at the time.