

TEACHER INFORMATION LETTER

Research Project: “Learning from Lessons: Studying the structure and construction of mathematics teacher knowledge (Online survey)”



THE UNIVERSITY OF
MELBOURNE

Dear Years 5, 6, and 7 teachers,

We would like to invite you to participate in a research project that aims to study mathematics teacher learning during the design and teaching of lessons. The project is funded by the Australian Research Council and is being conducted by Prof David Clarke, Dr Esther Chan, and Mrs Meredith Begg (Melbourne Graduate School of Education, The University of Melbourne), and Prof Doug Clarke and Ms Anne Roche (Mathematics Teaching and Learning Centre, Australian Catholic University).

What will I be asked to do?

If you agree to participate in this project, you will be asked to first complete a questionnaire online about your teaching background and beliefs and choose one of three pre-designed lesson plans suited to the year level you teach. You will adapt the lesson in any way that suits you and annotate the lesson plan to reflect these changes, upload the lesson plan through the online platform, and then deliver the adapted lesson to your usual class (Lesson 1) at a time convenient to you. You will then create and describe a follow-up lesson using a provided template, upload the lesson plan through the online platform, and deliver the lesson to the same class within a week of the first lesson (Lesson 2). You will be asked to respond to a series of questions online before and after teaching Lessons 1 and 2 regarding the lessons. You will also be asked to answer questions about your mathematics knowledge and teaching practice, and we suggest that this should be completed within two weeks after the teaching of Lesson 2. The suggested timeframe is as follows (the estimated time commitment for each step is given in *italics*):

Suggested timeframe	Steps/activities	Via the online platform
Beginning of project involvement	Step 1: Complete Questionnaire 1 about your teaching background and beliefs, and download a lesson plan (from a choice of 3) for adaptation and delivery to your usual class (<i>~1hr</i>)	✓
Up to 1 week after completing Step 1	Step 2: Notify the research team by email of when you plan to deliver the lesson (<i>~5mins</i>)	
Up to 1 day before teaching Lesson 1	Step 3: Annotate the lesson plan for adaptation (<i>~1hr</i>)	
	Step 4: Upload the annotated lesson plan and complete Questionnaire 2 about the upcoming lesson (<i>~30mins</i>)	✓
	Step 5: Teach the lesson to your usual class (Lesson 1) (<i>~1hr</i>)	
Up to 3 days after teaching Lesson 1 and up to 1 day before teaching Lesson 2	Step 6: Complete Questionnaire 3 about the lesson just taught and download a template for the follow-up lesson plan (<i>~30mins</i>)	✓
	Step 7: Fill in the template for the follow-up lesson plan (<i>~2hrs</i>)	
	Step 8: Upload the follow-up lesson plan and complete Questionnaire 4 about the upcoming lesson (<i>~30mins</i>)	✓
	Step 9: Teach the follow-up lesson to the same class (Lesson 2) (<i>~1hr</i>)	
Up to 3 days after teaching Lesson 2	Step 10: Complete Questionnaire 5 about the lesson just taught (<i>~30mins</i>)	✓
Up to 2 weeks after teaching Lesson 2	Step 11: Complete Questionnaire 6 to answer questions about your mathematics knowledge and teaching practice (<i>~1 to 1.5hrs</i>)	✓

Note. Steps 1, 4, 6, 8, 10, and 11 (shaded in purple) are completed online.

It is anticipated that full participation in the delivery of a single lesson pair (Lessons 1 and 2) would involve 10 hours in total. For those who are interested, there is the option to repeat the process to teach an additional one or two lesson pairs based on other pre-designed lesson plans (on different topics) provided.

What are the benefits of the research project?

Your participation in this research project will help us to understand mathematics teachers' thinking processes during lesson planning, teaching, and reflection. The project findings have the potential to improve teacher training and professional learning, leading to more effective use of teacher professional time and, ultimately, the improvement of teaching. The project provides you with the opportunity to carry out your lesson planning and reflection in a structured and guided way. We think you will enjoy thinking through and adapting the pre-designed lesson plan and designing your own follow-up lesson. Your students will experience a lesson that is designed to offer maximum learning opportunities for them and for you. Your time commitment in this project can count towards your professional development requirements. Upon completion of all the survey components for a single lesson pair, you will receive a certificate of participation and will be offered the full set of pre-designed lesson plans in this project for Grades 5, 6, and 7 (three per grade) in appreciation of your participation.

How will my confidentiality be protected?

Participant information is confidential and will be protected subject to related laws and to the degree permitted by the technology used. The online survey will be conducted via a secure website and the responses you provide will only be used for the purpose of this research project. Your email address will be recorded so that we can send you courtesy reminders to complete the different components of the survey. Your email address will also be used as an identification to link the responses to the different components of the survey. Please be assured that once the data collection stage of the project has been completed, your personal identification information will be separated from your questionnaire responses. An anonymous unique identifying code will be assigned to each respondent to link each respondent's questionnaire responses for the purposes of data analysis.

The data collected in the study will be used for two purposes: (i) for data analysis; and (ii) for use in presentations and publications to researchers and to teachers. Selected excerpts may be used in researcher and teacher training programs. We hope to publish the findings of this research in mathematics education journals, conference proceedings and books. The analysis will be published in a manner that does not identify the participants or their school. The written data will be de-identified in any publication and pseudonyms used for all participants where necessary. It is possible that for legal reasons people other than the research team may require access to the data collected, but this is most unlikely.

All downloaded electronic data and digital files associated with the project will be stored securely. Any paper documentation generated from the project with sensitive or identifiable information will be stored securely within a locked filing cabinet located in either the Melbourne Graduate School of Education at the University of Melbourne or at the Australian Catholic University (St Patrick's campus, Melbourne). The data generated by the research project will be kept at least five years from the date of any publication in which the data are reported. Should it be decided that the data are no longer of value beyond the five years, then all digital records will be deleted and all hardcopies will be destroyed under the supervision of Prof David Clarke.

How will I receive feedback?

We would be pleased to share our major findings with you should you indicate an interest in this. You will have the opportunity to express your interest upon completion of the final questionnaire for the major findings from the project to be emailed to you.

Will participation or non-participation prejudice me in any way?

Participation in this study is completely voluntary. You are not under any obligation to participate. If you agree to participate, you can still choose to withdraw from the study at any time without adverse consequences by not continuing to answer the questions. Any unprocessed data that you have provided up until that time will also be withdrawn. Any information which you supplied will be safeguarded subject to the relevant legal limitations.

Where can I get further information?

This research project has been approved by the Human Research Ethics Committee of The University of Melbourne. Any questions regarding this project should be directed to Professor David Clarke (Ph: 03 8344 1140; Email: d.clarke@unimelb.edu.au) or to the Project Manager, Dr Esther Chan (Ph: 03 8344 1234; Email: mc.chan@unimelb.edu.au). 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 Manager, Human Research Ethics, Research Ethics and Integrity, University of Melbourne, VIC 3010. Tel: 03 8344 2073 or Email: humanethics-complaints@unimelb.edu.au All complaints will be treated confidentially. In any correspondence please provide the name of the research team or the name or ethics ID number of the research project.

How do I agree to participate?

You can register your interest to participate in the project by filling in the online form at <https://learningfromlessons.iccr.edu.au/survey/> You will be sent a personalised link to the online platform. If you agree to participate, we would be grateful if you would read the consent form and click the agreement statement to proceed with the online process.

We hope you enjoy your involvement with this research.

Yours sincerely,



Professor David Clarke



Dr Esther Chan