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Secondary mathematics teachers' alternative designs for assessing problem-solving in grades 11 and 12 mathematics.

PARTICIPANT INFORMATION STATEMENT

(1) What is this study about?

You are invited to take part in a PhD research study under the supervision of Chief Investigator, Dr Graham Hendry, about NESA's mandatory assessment requirement in the NSW senior mathematics courses. The requirement to include an "assignment or investigation-style task" in senior mathematics courses is an important change for NSW mathematics teachers.

The purpose of this study is to explore senior teachers' interpretation and implementation of NESA's alternative assessment requirement. The aims of this study are to identify the types of tasks that senior mathematics teachers are designing in response to NESA's assessment requirements. This study also aims to identity the factors/dilemmas that may influence teacher's designs of these alternative assessments. The significance of this study is that the results can potentially inform decision-making in schools about ways to support and enhance teachers' understanding and design of alternative assessments in mathematics in senior years.

You have been invited to participate in this study because as a NSW mathematics senior teacher you have experience in teaching and assessing the NSW mathematics syllabus outcomes. This Participant Information Statement tells you about the research study. Knowing what is involved will help you decide if you want to take part in the research. Please read this sheet carefully and ask questions about anything that you don't understand or want to know more about.

Participation in this research study is voluntary.

By giving your consent to take part in this study you are telling us that you:

- ✓ Understand what you have read.
- ✓ Agree to take part in the research study as outlined below.
- ✓ Agree to the use of your personal information as described.

You will be given a copy of this Participant Information Statement to keep.

(2) Who is running the study?

The study is being carried out by the following researchers:

- Ms Kelly Padayachee, PhD student, University of Sydney
- Dr Graham Hendry, Chief Investigator, University of Sydney
- Associate Professor Judy Anderson, Honorary, University of Sydney
- Professor James Tognolini, University of Sydney

(3) What will the study involve for me?

You will be asked to complete a questionnaire on your views about NESA's new assessment requirements and to describe a task that you have designed or used to assess your senior students that meet NESA's new assessment requirements. You will be asked to possibly participate in an individual interview about how you interpret and implement NESA's mandatory assessment requirements in grades 11 and 12. If you choose to participate in the interview a second online survey will be sent to you. The interview will be one-hour long. You will be asked to bring a task to the interview and discuss how you feel the task effectively assesses problem-solving skills. Your interviewer (Ms Kelly Padayachee) is a secondary mathematics teacher from New South Wales. The interview will be arranged to take place at a location convenient for you. With your consent the interview will be audio recorded with a digital recorder.

(4) How much of my time will the study take?

This study will involve you in spending 20 minutes completing the open-ended questions, if you have indicated that you are willing participate in the interview. A second questionnaire will be emailed to you which involves you spending 20 minutes completing the questions. If contacted for an interview the interview will be an hour of your time.

(5) Who can take part in the study?

Secondary mathematics teachers in NSW who are current members of the MANSW Facebook group can participate in this study.

(6) Do I have to be in the study? Can I withdraw from the study once I've started?

Being in this study is completely voluntary and you do not have to take part. Your decision whether to participate will not affect your current or future relationship with the researchers or anyone else at the University of Sydney.

If you decide to take part in the study and then change your mind later, you are free to withdraw at any time with no consequences. You can do this by sending an email to the Chief Investigator, Dr Graham Hendry, in the research study, whose email is graham.hendry@sydney.edu.au, and whose contact details are listed at the top of this participant information statement.

You are free to stop the interview at any time. Unless you say that you want us to keep them, any recordings will be erased and the information you have provided will not be included in the study results. You may also refuse to answer any questions that you do not wish to answer during the interview.

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If you decide to withdraw from the study, we will not collect any more information from you. Please let us know at the time when you withdraw what you would like us to do with the information we have collected about you up to that point. If you wish your information will be removed from our study records and will not be included in the study results, up to the point that we have analysed and published the results.

(7) Are there any risks or costs associated with being in the study?

Aside from giving up your time, we do not expect that there will be any risks or costs associated with taking part in this study.

(8) Are there any benefits associated with being in the study?

The results of this study can potentially inform decision-making in schools about ways to support and enhance teachers' knowledge about alternative assessment design. However, we cannot guarantee that you will receive any direct benefits from being in the study.

(9) What will happen to information about me that is collected during the study?

No information about you will be collected and used in the study. With your consent the interview will be audio recorded using a digital recorder. The digital recordings will be transcribed into a digital file by a professional transcription service. During the study, all digital files will be stored in a secure file repository in the University of Sydney's Research Electronic Data Capture (REDCap) application. Only the researchers named in this statement will have password-protected access to this secure file repository. All other versions of digital audio recordings and transcripts of interview will be deleted from all other electronic devices and the professional transcription service server once they have been downloaded and uploaded to REDCap. After the study is completed all digital files will be stored in the University of Sydney's secure, password-protected Research Data Store (RDS). Data from the study will be stored for five years after publication of the results of the study, and after this five-year period, all data will be destroyed. Only the researchers named in this statement will have access to all data during and after the study.

The overall results of this research project will be disseminated in a thesis a digital copy of which will be stored in the University of Sydney library. Your confidentiality and privacy of your data will be protected in the dissemination of research results by using non-identifiable terms when referring to your interview statements. The terms used will be teacher A, teacher B, teacher C, or pseudonyms. Any of your interview statements or parts of statements that could be quoted in the thesis or an article for publication in a peer-reviewed journal will first be thoroughly checked for any identifiable information and will not be quoted if identifiable information is found.

By providing your consent, the data collected from you will only be used for the purposes outlined in this Participant Information Statement, unless you consent otherwise.

(10) Can I tell other people about the study?

Yes, you are welcome to tell other people about the study.

(11) What if I would like further information about the study?

When you have read this information, Dr Graham Hendry will be available to discuss it with you further and answer any questions you may have. If you would like to know more at any stage during the study, please feel free to contact Dr Graham Hendry, Senior Lecturer, University of Sydney graham.hendry@sydney.edu.au or mobile 0490 684 879.

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(12) Will I be told the results of the study?

You have a right to receive feedback about the overall results of this study. You can tell us that you wish to receive feedback by ticking the relevant box on the consent form. This feedback will be in the form of a one-page lay summary. You will receive this feedback after the study is finished.

(13) What if I have a complaint or any concerns about the study?

Research involving humans in Australia is reviewed by an independent group of people called a Human Research Ethics Committee (HREC). The ethical aspects of this study have been approved by the HREC of the University of Sydney [2021/647]. As part of this process, we have agreed to carry out the study according to the *National Statement on Ethical Conduct in Human Research (2007)*. This statement has been developed to protect people who agree to take part in research studies.

If you are concerned about the way this study is being conducted or you wish to make a complaint to someone independent from the study, please contact the University using the details outlined below. Please quote the study title and protocol number.

The Manager, Ethics Administration, University of Sydney:

• **Telephone:** +61 2 8627 8176

Email: human.ethics@sydney.edu.auFax: +61 2 8627 8177 (Facsimile)

This information sheet is for you to keep