

Professor John Fischetti School of Education, Faculty of Education and Arts University of Newcastle Callaghan NSW 2308, Australia (02) 4921 6864 john.fischetti@newcastle.edu.au

Information Statement for the Research Project: Professional Learning in Coding and Computational Thinking for Primary School Teachers Stage 1: Professional Learning Programs Document Version 2.0; dated 20/03/2018

You are invited to participate in the research project identified above which is being conducted by Mr Daniel Hickmott, Professor John Fischetti, Dr Elena Prieto-Rodriguez and Mr Andrew Lyell from the School of Education at the University of Newcastle.

The research is part of Mr Daniel Hickmott's doctoral studies at the University of Newcastle, supervised by Professor John Fischetti, Dr Elena Prieto-Rodriguez and Mr Andrew Lyell from the School of Education.

Why is the research being done?

The purpose of the research is to investigate how Stage 3 teachers learn and teach Coding and Computational Thinking. In New South Wales, these two skills are essential to the Digital Technologies strand of the Science and Technology syllabus, which is planned to be implemented in 2019. The New South Wales Education Standards Authority has also encouraged teachers to apply Coding and Computational Thinking across the existing Key Learning Areas.

This project will investigate how Stage 3 teachers that participate in a professional learning program learn and teach Coding and Computational Thinking. This is an area that has not been researched extensively but that is important because understanding how teachers learn and teach these skills can help educators, and researchers, create professional learning programs focused on Coding and Computational Thinking that are effective and relevant to teachers' practice.

Who can participate in the research?

We are seeking casual, part-time and full-time in-service primary school teachers who teach in the Newcastle and/or Hunter region and that will also be available to attend a series of after-school tutorials during Term 2 of 2018. If you are currently teaching at a high school level, you are not eligible to participate in this project.

What would you be asked to do?

Before you are enrolled into one of the professional learning programs that are part of the project, you will be asked to complete the expression of interest form that is available online at the following web address: In the expression of interest form, you will be asked to provide your full name, the name of your school and your contact email address. You will also be asked whether you would prefer to participate in the ScratchMaths program or the Coding & STEAM program. However, please note that this preference does not guarantee you a place in either of the programs, as participants will be enrolled in the programs on a first-come first-served basis.

You will be contacted by the end of April with an email that will let you know whether you have been enrolled into one of the professional learning programs. If there are not enough places available in the programs, you may not be selected to participate in the program.

If you express interest in one of the programs, but there is not an equal number of participants in the programs, then you may be selected to take part in the other program. For example, you may express interest in attending the ScratchMaths program. However, if 40 teachers have signed up for the ScratchMaths program and 20 teachers have signed up for the Coding & STEAM program, then you may be selected to participate in the Coding & STEAM number to balance the numbers.

If you are enrolled into one of the professional learning programs, you will be asked to:

- Attend 10 weekly 2 hour after-school tutorial sessions during Term 2 of the school year
- Complete an online short journal entry at the end of each of the after-school tutorial sessions
- Complete online surveys on the following occasions:
 - o The first after-school tutorial session
 - The last after-school tutorial session
 - After the professional learning program has been completed and a school term has passed

In the second survey, you will be asked whether you would like to be contacted for an interview and/or are willing to be observed teaching Coding in Term 4 of 2018. If you indicate that you can participate in an interview or are willing to be observed teaching, then we will send you an email at the end of Term 3 of 2018 that will explain how the interviews/observations will be conducted and invite you to participate in Stage 2 of the project.

What choice do you have?

Participation in this research is entirely your choice. Only those people who give their informed consent will be included in the project. Whether or not you decide to participate, your decision will not disadvantage you.

If you do decide to participate in the project, you may withdraw from the project at any time without giving a reason and have the option of withdrawing any data which identifies you.

How much time will it take?

The expression of interest form for the professional learning programs should take approximately 2 minutes to complete.

Both the ScratchMaths and Coding & STEAM professional learning programs will involve 10 after-school tutorial sessions, that will run from 4:30pm – 6:30pm in a computer lab at the Hunter Building. The Hunter Building is located at the University of Newcastle's Callaghan campus. The ScratchMaths program will be run on Monday afternoons, starting from the 14th of May 2018 and ending on the 16th of July 2018. The Coding & STEAM program will be run on Friday afternoons, starting from the 18th of May 2018 and ending the 20th of July 2018.

The first and second surveys should take approximately 15 - 20 minutes to complete and will be filled out during the tutorial time on the first and last sessions of the program. The weekly journal submissions will also be filled out during the tutorial sessions and each of these will take approximately 5 minutes to complete.

The third survey will be sent to you through email and will also take approximately 15 – 20 minutes to complete.

What are the risks and benefits of participating?

There are no known risks or potential harms from participating in this research. The project will be registered with the New South Wales Education Standards Authority (NESA), and, if you complete the professional learning program, you will receive 30 hours of registered professional learning addressing standards 2.6.2, 3.3.2, 3.4.2, 4.5.2, 6.2.2, 6.4.2 from the Australian Professional Standards for Teachers towards maintaining Proficient Accreditation in NSW.

It is also anticipated the findings will benefit the field of Education and the knowledge base of professional learning research that is focused on teaching Coding and Computational Thinking.

How will your privacy be protected?

All data from the surveys and interviews will be stored on a secured computer on a University of Newcastle password-protected computer. The data files will be retained for a minimum of five years from the completion of the project. These data files will only be accessed by the members of the research team, who are listed are the beginning of this information statement.

How will the information collected be used?

The information collected will be used when writing reports, journal articles and conference papers, as well as for Mr Daniel Hickmott's PhD studies. Individual participants will not be identified in any publications from the project.

Non-identifiable data may also be shared with other parties to encourage scientific scrutiny, and to contribute to further research and public knowledge, or as required by law. A summary of the research findings will be available to participants after completion of the study. If you would like to receive one of these summaries, please contact Mr Daniel Hickmott at <u>Daniel.Hickmott@uon.edu.au</u>. Please note it is anticipated that these summaries will be available in mid-2019.

What do you need to do to participate?

If you would like to participate in one of the professional learning programs, please complete the expression of interest form available online here: <u>https://www.surveymonkey.com/r/uon_coding</u>.

If you have been selected to be enrolled into one of the programs and are willing to attend the after-school sessions, please complete, sign and scan the consent form and send it to Mr Daniel Hickmott at <u>Daniel.Hickmott@uon.edu.au</u>

Please read this Information Statement and be sure you understand its contents before you consent to participate. If there is anything you do not understand, or you have questions, please contact the researcher.

Further information

If you would like further information please contact Mr Daniel Hickmott by email at: <u>Daniel.Hickmott@uon.edu.au</u> or by phone: (02) 4921 8786 or Professor John Fischetti at <u>john.fischetti@newcastle.edu.au</u>

Thank you for considering this invitation.

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Professor John Fischetti, Head of School, School of Education

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Mr Daniel Hickmott PhD Candidate, School of Education

Complaints about this research

This project has been approved by the University's Human Research Ethics Committee, Approval No. H-2018-0071.

Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Services, NIER Precinct, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 4921 6333, email <u>Human-Ethics@newcastle.edu.au</u>.