



School of Computer Science
Building 303, 38 Princes St, Auckland
+64 9 373 7599

The University of Auckland
Private Bag 92019
Auckland, New Zealand

PARTICIPANT INFORMATION SHEET

Student

Project title: Learning to Debug Programs in Introductory Computing Courses

Name of Research Team: Associate Professor Andrew Luxton-Reilly, Professor Amber Settle, Associate Professor Jacqueline Whalley

Researcher introduction

The research team for this project consists of Associate Professor Andrew Luxton-Reilly from the School of Computer Science at University of Auckland, Professor Amber Settle from DePaul University in the USA, and Associate Professor Jacqueline Whalley from Auckland University of Technology.

Project description

We seek to understand what strategies students are employing to debug programs, the impact that debugging exercises have on the strategies that students employ when debugging, and why students are using the strategies that they employ.

Since you are enrolled in a course that involves programming, you are invited to participate in this study.

Project procedures

If you agree to participate then a member of the research team will make an appointment to meet with you for approximately 1 hour in a quiet room with a computer located at the University of Auckland. You will be asked to complete some activities that involve debugging and to explain aloud what you are doing. This is known as a “think aloud” protocol and helps us to understand your reasoning when you make choices about debugging. You will also be asked some questions about debugging in general, and what sorts of strategies you find effective.

If you agree to participate in the study, then you will receive \$50 of grocery vouchers to thank you for your time. You will receive these vouchers whether or not you complete the study, and regardless of whether you withdraw your data.

Data storage and use

Both the computer screen and your voice will be recorded during the study. The audio data will be transcribed and a copy of the transcription will be sent to you for corrections. You will have two weeks to review the transcript and to make any corrections. After two weeks the analysis of the data will begin and it may not be withdrawn.

A code number will be used to link the consent form and the data, and the data will be stored without any identifying features. The data will be stored digitally on a password protected University of Auckland computer, backed up by a server for an indefinite period, but minimally for 6 years for potential future research to use as a comparison (e.g., to see if debugging strategies have changed).

Anonymity and Confidentiality

All data will be stored separately from the consent form and will use only a code number to link your identity to the raw data. In any publications, your identity will not be revealed.

Right to withdraw from participation

You have the right to withdraw from participation at any time. You also have the right to withdraw your data up until 2 weeks after you receive a transcript of your data. After two weeks the analysis of the data will begin, and it will not be possible to withdraw your data.

Consent

You are free to choose whether not you participate. The Head of the School of Computer Science has given their assurance that neither grades nor academic relationships with the school or members of staff will be affected by either refusal or agreement to participate. If you choose to participate then your consent form will be digitally scanned and the original will be destroyed by placing it in a confidential bin for secure disposal. The digital copy of your consent form will be kept for 6 years and then deleted.

Funding

The researchers have sought funding from both DePaul University and the University of Auckland to support this research project.

Contact Details

If you have any questions at any time you can contact the researchers using the details provided below:

Name	Phone	Email
Assoc. Prof. Andrew Luxton-Reilly	+64 9 923 5654	a.luxton-reilly@auckland.ac.nz
Prof. Amber Settle		ASettle@cdm.depaul.edu
Assoc. Prof. Jacqueline Whalley		jacqueline.whalley@aut.ac.nz

or you can contact the Head of the School of Computer Science, Associate Professor Giovanni Russello (email: g.russello@auckland.ac.nz; phone: +64 9 923 6137)

For any queries regarding ethical concerns you may contact the Chair, The University of Auckland Human Participants Ethics Committee, Office of Research Strategy and Integrity, The University of Auckland, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 ext. 83711. Email: humanethics@auckland.ac.nz

APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON 11/12/2019 for 3 years, Reference Number 024038