

Project Report

* indicates a required field

Research Title

Information Security Online: A Critical Evaluation of College Students' Security Awareness in New Zealand

This question is read only.

Please provide a short summary of the work that was completed as part of this project / research *

College students access public networks and often underestimate the threat of unsecured open networks. The tight connections between educational cyber communication and corporate infrastructure as well as confidential information exchange over the Internet, are therefore creating a vulnerable situation for the whole community. Therefore, InfoSec related concerns relevant to the international student body need to be investigated and proper solutions implemented.

This research study evaluated and compared students' actual information security (InfoSec) practices at ICL Graduate Business School, and their perception of their own InfoSec awareness in July 2018. We then designed and proposed InfoSec awareness programmes (e.g., workshops, brochures) to improve students' Internet InfoSec knowledge.

Describe the 'who, what, where, when and why' of your initiative

Timing

Is your project / research complete? *

Yes No

If your initiative is still in progress, pick 'no'

Start Date

12/03/2018

Must be a date.

Finish Date

20/09/2018

Must be a date.

Milestones

What have been the major steps / stages (i.e. milestones) involved in delivering your initiative to date?

Milestone	Description
Conducting comprehensive review on InfoSec Literature and benchmarking InfoSec programmes	Achieved.
Designing survey questionnaire and the simulated phishing email	Achieved.

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Research ethics application submission, revision and approval	Achieved.
Updating InternetNZ research committee regarding the research progress and milestones	Achieved.
Sending out the simulated phishing emails and conducting the main study data collection and analysis	Achieved.
Sharing the report with students, ICL staff along with recommended solutions	Achieved.
Dissemination for students through brochures and InfoSec Expert Panel workshops	Achieved.
Paper writing and submitting to Pacific Asia Conference on Information Systems	We planned to submit this paper to the Australasia Conference on Information Systems. Due to the time limitation, we are going to submit the paper to the Pacific Asia Conference on Information Systems in February 2019.
Submitting the research report to NZQA (through ICL Graduate Business School) with proposed programmes	In progress. Will submit it to NZQA by December 2018.
e.g. planning; major activities; evaluation	

Outcomes

What outcomes were generated as a result of this project / research?

Outcomes are the changes that have occurred for the beneficiaries of your initiative. Generally outcomes can be framed as an increase or decrease in one or more of the following:

- Skills, knowledge, confidence, aspiration, motivation, (these are generally **immediate** or short-term outcomes)
- Actions, behaviour, change in policy (these are generally **intermediate** or medium-term outcomes)
- Social, financial, environmental, physical conditions (these are generally **long-term** outcomes)

Immediate outcomes occur directly following an activity (e.g. within 1 month); intermediate outcomes are those that fall between the immediate and long-term (e.g. between 1 month and 2 years); and long-term outcomes are those we expect to see years later (e.g. 2, 5, 10 or 50 years after the activity).

We also want to learn more about how you tracked the outcomes of your initiative - what you measured and how.

If you need more help understanding what outcomes are, read the help sheets at www.ourcommunity.com.au/evaluation

List your initiative's outcomes and attached information in the following table. Leave blank any fields that do not apply to your project.

Outcome	Were these outcomes anticipated?	Timeframe	Indicator	Verification Method
Understanding students' general InfoSec awareness level *	Anticipated	Immediate	Results from an online survey designed for this study	Survey
Measuring students' actual InfoSec behaviour	Anticipated	Immediate	Results from a simulated phishing email	Phishing campaign
Comparing students' actual InfoSec practices with their perception of their InfoSec awareness	Anticipated	Intermediate	Results from comparing the data gathered from the survey and the phishing test	Survey and phishing campaign
Improvement in students' InfoSec awareness and behaviour	Anticipated	Long-term	A summary of this study along with InfoSec solutions was available to students and staff through: <ul style="list-style-type: none"> - electronic notice board (digital screens) on each floor of the school, - Printed posters on the bulletin board of each floor of the school, - Dissemination of printed brochures among students via lecturers, - InfoSec expert panel workshop with the students as well as Q&A session 	Focus group discussions with students after dissemination
Submission of the research report to NZQA with proposed programme (in progress)	Anticipated	Long-term	In progress	

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Designing a new research project based on the results of this study to better understand the factors influencing information security behaviours more broadly	Unanticipated	Long-term	This study was conducted in only one school (ICL Graduate Business School). In order to better understand and compare tertiary students' InfoSec behaviours on a larger scale, we aim to conduct a similar study (applying InfoSec theories) across other schools/universities such as Auckland University of Technology.	A Survey as well as a maladaptive message will be designed.
Outcomes are the changes that you believe were generated or influenced by your initiative. See information above.	Choose from the list	Choose from the list (see description above)	What you used to measure this outcome - e.g. 'change in teenage pregnancy rates from x to y'	e.g. survey; interviews; focus groups

What (if anything) did you change in your approach and practices as your project research proceeded, and why? *

Nothing major changed.

We may use this information to help inform others undertaking similar work

What did you learn as a result of undertaking this project/program? *

- Timing perspective: This study required more time from the primary researchers than expected. However, we managed to achieve most of the milestones on time.
- Our assumptions were mostly substantiated: The majority of students fell victim to the simulated phishing email, an outcome which was in conflict with the survey findings on their perception about their InfoSec practices. Therefore, there is a big discrepancy between students' actual InfoSec behaviour and their perception about their InfoSec practices. Thus, it may be necessary for higher education institutions to provide customised InfoSec training for students before their graduation and employment. Students' lack of InfoSec awareness may cause significant issues for the organisations they have relationships with.

We are particularly interested in lessons that may help others undertaking similar work. Think about what you learned about your inputs (money, skills, personnel, time - too much; too little; about right?); your assumptions (were they 100% right, only partly right, or were the results a complete surprise?); and the context of the project/program (timing; targeted beneficiaries; geographic settings - were they right; wrong; about right?)

How will you share your learnings from this project/research? *

- We will submit and present the findings of this study to the Pacific Asia Conference on Information Systems, in 2019.

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- The researchers will liaise with the InternetNZ community regarding opportunities to present the findings and possible solutions at upcoming related event(s) (probably in 2019), which may be helpful for the higher education community as well as business and community agencies who engage with InternetNZ.

What mediums were used to share the learnings? Have you reached the audience you expected?

We'd love to see some visual and audio representations of your work. Please share below.

Upload files:

Filename: Archive.zip
File size: 686.2 kB

and/or

Provide web link:

Must be a URL

and/or

Provide additional details:

Please include captions, if relevant

Can we use your media content in our own communications?

Yes No Please contact us first
e.g. in our annual report

Financial Report

* indicates a required field

Project Income & Expenditure

Please provide details of any project income (funds received) and project expenditure (funds spent) to date.

Use the 'Notes' column to provide any additional information you think we should be aware of.

Income Description	Income Type	Confirmed Funding?	Income Amount (\$)	Notes
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Researchers' salary	Earned Income *	Confirmed *	\$10,000.00 *	ICL Graduate Business School supported this research by providing the researchers with research time allocations. Salary buy-out primary researcher for 8 hours/w, 30 weeks. Salary buy-out co-researcher for 2 hours/w, 13 weeks *

Expenditure Description	Expenditure Type	Expenditure Amount (\$)	Notes
Researchers' salaries *	Salaries and Wages *	\$21,000.00 *	
SurveyMonkey platform	Administrative and Infrastructure	\$318.00	Used SurveyMonkey platform to send the survey links to the participants (\$53 per month for 6 months)
License for the Smart PLS data analysis system	Evaluation	\$500.00	Used SmartPLS to analyse the collected data from participants. Professional license of the SmartPLS for one user/per year
Dissemination for students	Other Expenditure	\$2,500.00	Based on the findings of this project, InfoSec promotion campaigns, brochures and posters were produced and disseminated among students. We provided an InfoSec expert panel in order to better explain the concepts to students and answer their potential questions

Income and Expenditure Totals

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Total Income Amount	Total Expenditure Amount	Income - Expenditure
\$10,000.00 This number/amount is calculated.	\$24,318.00 This number/amount is calculated.	-\$14,318.00 This number/amount is calculated.

Have you experienced any issues with your intended project budget to date? If so, please explain reasons for any major variances or for providing incomplete information:

No

ICL Graduate Business School supported this project.

Certification and Feedback

Feedback

You are now nearing the end of this form. Before you review your application and click the **SUBMIT** button please take a few moments to provide some feedback. (If you would rather provide anonymous feedback, please go to **{{ Grantmakers: provide a link to an anonymous survey or delete this sentence }}**)

Please indicate how you found the acquittal process:

Very easy Easy Neutral Difficult Very Difficult

How many minutes in total did it take you to complete this form?

180

Estimate in minutes (i.e. 1 hour = 60 minutes)

Please provide us with your suggestions about any improvements and/or additions to this form that you think we need to consider:

I think the whole procedure of the InternetNZ funding is well designed.

Thanks to admin team (Gertrud), for providing support and guidance.