

Configuration Manual

MSc Research Project
Cybersecurity

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MSc Project Submission Sheet
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 Cybersecurity
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 Research project
Module:

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 Cybersecurity Behaviour Intentions in Students
Project Title:

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1 Abstract

Humans are said to be the weakest link in the cybersecurity chain. Given the extensive use of online services for education and communication, students are particularly vulnerable to cybersecurity threats on a daily basis. This research examines the variables affecting students' cybersecurity behaviour, identifying correlations between specific human characteristics and their intentions for cybersecurity behaviour.

2 Research question

To what extent do students' perceived vulnerability to cyberattacks affect their cybersecurity behaviour intentions?

3 Target demographic

Locate target demographic. For this project, the target demographic was current NCI students.

4 Survey development

- Paper Search: Conduct an exhaustive search of academic databases, including PubMed, IEEE Xplore, Research Gate, and Google Scholar, using keywords such as "cybersecurity behaviour," "social engineering," "students," and "survey."
- In-depth Paper Analysis: Scrutinize and synthesize the survey appendixes from relevant research papers, ensuring alignment with the research question or objectives.
- Data Sheet Creation: Extract survey questions, response options, and question category from the selected papers.
- Question Selection: Select questions based on relation or complementing SeBIS scale by (Egelman, Harbach and Peer, 2016), and statistical significance
- Question Answer Scaling: Implement SeBIS scale uniformly throughout the survey.

5 Survey structure

- Demographics: Collect information such as age, gender, year of study, and academic discipline.
- Perceived Vulnerability to Cyberattacks: Assess students' perception of their susceptibility to cyberattacks.
- Risk-taking Preferences: Measure students' willingness to engage in risky behaviours related to cybersecurity.

- **Personality Traits:** Evaluate personality traits associated with cybersecurity behaviour, including extraversion, conscientiousness, and risk avoidance.
- **Decision-making Styles:** Assess decision-making styles related to cybersecurity, including intuition and analysis.
- **Online Security Behaviour:** Evaluate current online security practices, such as password management, phishing awareness, and software updates.
- **Cybersecurity Behaviour Intentions:** Assess students' intentions to engage in specific cybersecurity behaviours in the future.

6 Survey distribution

- Implement the survey online using a secure platform e.g. MS Forms
- Publicity promote the survey to the demographic e.g. social media channels.
- Implement appropriate data security measures to protect participants' privacy.

7 Data analysis

- **Descriptive Statistics:** Summarize survey responses using descriptive statistics, such as means, medians, and standard deviations.
- **Correlation Analysis:** Identify relationships between variables, such as perceived vulnerability and cybersecurity behaviour intentions.
- **Regression Analysis:** Determine the extent to which perceived vulnerability predicts cybersecurity behaviour intentions.
- **ANOVA Analysis:** Compare differences in cybersecurity behaviour intentions across different subgroups, such as gender or academic discipline.

8 Findings

Give detailed descriptions of findings from the data analysis. Discuss if the findings answered the research question, limitations, and improvement of the design.

9 Conclusion

Write a conclusion of the research and its findings, and give an insight to improvement or future works