

Feasibility Study of 'Practicing Safe Sex(t) - Implementing mitigations to tackle the rise of technology-facilitated sexual violence'

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CMP400: Honours Project Proposal and Execution

Ethical Hacking - Year 4

2021/22

Research Question

General RQ: How can gamification be applied to educate people about technology-facilitated sexual violence?

Specific 1: What are the mitigations available to prevent technology-facilitated sexual violence?

Specific 2: How effective are the mitigations at educating, preventing, and protecting people against technology-facilitated sexual violence?

Specific 3: How effective is gamification to educate people about technology-facilitated sexual violence?

Title: Practicing Safe Sex(t): Implementing mitigations to tackle the rise of technology-facilitated sexual violence

Aim: To develop a serious game to educate adults about technology-facilitated sexual violence to prevent and protect people from becoming victims.

Objectives:

- Review and evaluate the effectiveness of mitigations currently in place to prevent technology-facilitated sexual violence (TFSV).
- An accessible and user-friendly serious game will be developed to educate, prevent, and protect users against TFSV.
- To evaluate effectiveness of the game, participants will be required to complete a pre and post survey about their knowledge and opinion on TFSV.

Risk Analysis

Identified Risks

Risk Number	Risk	Effect of Risk	Risk Mitigations
R1	Lack of knowledge with game-development software	This risk can have a detrimental effect on the project as the serious game is the mitigation that will be developed. Without the game, the project will not be able to evaluate the effectiveness of gamification as a mitigation against tech-facilitated sexual violence.	This risk can be mitigated using free tutorials available on YouTube and free game-development websites. The use of community forums and discord servers can also be utilised during the learning and development phase of this project, if problems are encountered.
R2	Mental Health could be affected	Due to the stress and pressure of the project, it is possible that the researcher may suffer from stress and burnout. The sensitive material within the project particularly during the research phase of gathering information about tech-facilitated sexual violence could cause distress to the researcher. These risks could potentially affect the quality of the project and the volume of deliverables. These risks could also affect the researcher's mental health to the extent that they are unable to complete the project.	This risk can be mitigated through monitoring the researcher's mental health state weekly, noting any changes, and identifying any potential triggers. By identifying these triggers and removing or reducing them, this should prevent this risk from affecting the project. The risk that sensitive material presents will be mitigated through screen breaks, limiting the number of articles read each day and if deemed necessary reaching out to the university counselling service. A contingency plan will be put in place in case the risk becomes severe and requires immediate attention. This contingency plan will involve the university counselling service and accessing GP services.
R3	Coronavirus affecting researcher	This risk can have a low effect to the project. If the researcher was to contract coronavirus, there is the potential for bed rest or hospitalisation due to underlying health conditions.	The coronavirus pandemic is still ongoing; however, the world has had time to adjust. The researcher is currently mitigating this risk through social distancing, mask wearing and regular LFT testing. The researcher will continue to do so until no longer necessary.
R4	Hardware and/or Software failure	Hardware can potentially become damaged or stop working at any point during the project, causing the loss of any work that is not saved properly. Software such as cloud providers can also fail, meaning that cloud saves will be inaccessible.	By using OneDrive to save word documents, GitHub for code development and Google Drive for other artefacts and material, the hardware risk is mitigated. Physical backups of these artefacts and materials will also be kept as to prevent software/cloud risks affecting the project. Researcher has backup equipment available as well.
R5	Lack of participants for testing	Due to the pandemic, in-person testing is not currently safe. This means that participants will need to test the	This risk can be mitigated through accessing the societies within the Student Body such as Law, Psychology, and other SA societies for participants. There

		mitigation and complete the surveys online – this may mean that there is a lack of participants to test the game.	is also the ability to post on LinkedIn, Twitter, and Facebook to encourage a wide range of participants.
R6	Game not working on participant's devices	As participants are playing the game on their own devices, there is a risk that the game will not be compatible on their device. This could mean that they will not be able to test the game and feedback on its suitability as a mitigation.	To mitigate this risk, the researcher will do a pilot study with family and friends under the expected testing/evaluation method to ensure that the game is functional for participants with various devices. The tester will also attempt to have a web-friendly version of the game, so that any device can play the game.

Table 1 - Risks identified within the honours project

Risk Matrix

		Consequence				
Likelihood		Very Low (1)	Low (2)	Medium (3)	High (4)	Very High (5)
	High (3)	Low (3)	Medium (6)	Medium (9)	High (12)	High (15)
	Medium (2)	Low (2)	Low (4)	Medium (6)	Medium (8)	Medium (10)
	Low (1)	Low (1)	Low (2)	Low (3)	Low (4)	Low (5)

Table 2 - Risk Matrix showing overall risk calculated by Likelihood x Consequence (Turner 1993)

Overall Risk:

Low (Green = 1-5) – These risks can be easily mitigated, without the overall project being affected.

Medium (Amber = 6-10) – These risks can potentially cause issues with the project if not mitigated effectively, these risks should be continually assessed, and mitigations evaluated for effectiveness.

High (Red = 11-15) – These are critical risks that can potentially cause the project to fail, these risks should be mitigated, and the use of contingency plans should be implemented if they do happen.

Likelihood, Consequence and Overall Risk

Risk Number	Risk Likelihood	Risk Consequence	Overall Risk
R1	Medium	High	Medium (8)
R2	Medium	Very High	Medium (10)
R3	Low	Very Low	Low (1)
R4	Low	High	Low (4)
R5	Medium	Medium	Medium (6)
R6	Medium	High	Medium (8)

Table 3 - Table detailing the Likelihood, Consequence and Overall Risk for each risk

Gantt Chart

