



SFWRENG 4HC3: Human Computer Interfaces

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Research Plan

Group 2

MacLib (Internal name)

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Table of Contents

Research Plan	3
Initial Research Instruments.....	4
Pilot Test Feedback and Report	4
Revised Research Instruments	5

Research Plan

Our ideal research plan for gaining an understanding of the stakeholders, their needs, and their current technology is as follows:

- Who are the people that you would speak to?
 - McMaster Students
 - Students enrolled in *CompSci 4HC3*
 - Students who frequently visit libraries
 - McMaster staff
 - McMaster administrators
 - Cleaning staff
 - Restaurant workers/owner
 - Library front desk staff
 - Researchers and Professors
 - Building designers
 - Third-Parties
 - Campus security
 - Fire officials
 - Technicians (for printers, computers, etc)
 - Construction staff
- How will you recruit them?
 - Informal interviews
 - Questionnaires
 - Semi structured interviews
 - Emails
 - Surveys
 - Focus groups
 - Incentivised participation in survey (money, food, gift card)
- Is there more than one important stakeholder group?
 - Yes, the most important stakeholders are:
 - McMaster students
 - McMaster staff
 - Cleaning staff
 - McMaster administrators
 - Library front desk staff
 - Building designers
 - McMaster Employees
 - Campus security
- Which research methods would you use? Explain your chosen methods.
 - The research methods we are planning to use are informal interviews, questionnaires, surveys, and emails. We chose these research methods because we believe that they appeal to our different classes of stakeholders.
- Would you use different instruments or methods for different stakeholder groups?
 - Generally, we would use a wide range of instruments and methods, as different stakeholder groups respond differently to each. For example, students are typically busy individuals with short attention spans and a lack of time which would lead to poor results if certain instruments such as focus groups were employed. Instead, it would be more effective to reserve this for a different class of stakeholder as they may respond better.

Initial Research Instruments

With students as the target audience, we need to choose research instruments that are concise and precise, often very short. Digital forms are a current norm that people use to solicit information from thousands of people with the lowest contact and interaction, often used at the university level. Another common instrument is semi structured interviews which allow for deeper connection with the subject leading to a higher quality information at a lower scale. The initial research instruments are as follows:

Questionnaire (Google Form):

- <https://forms.gle/zDJYpeCTTwHhxs7B8>

Semi-structured interview (Questions to ask):

- Do you have trouble finding study space on campus?
- Which libraries do you go to the most?
- Where do you usually sit within a library?
- What kind of area do you prefer to study within a library?
- Do you eat food at the library?
- What kind of food do you find yourself eating the most?
- How often do you study on campus?
- Where do you study on campus?
- Are you aware that study rooms can be booked on campus?
- Are you aware of how and where to book study rooms on campus?

Pilot Test Feedback and Report

The feedback we received during the pilot testing phase made us realize that our questions were too specific, and did not apply to a wide range of stakeholders. For example, some students do not study on campus, and actively try to avoid it. These students plan their schedule ahead of time, so they spend more time at home and less time on campus. Our previous questionnaire did not account for these students. Future questionnaires should be multifaceted in order to accommodate all kinds of students with different studying habits. If a student does not study on campus, then the questionnaire should end as soon as possible. To solve this problem, questions should be grouped. If the answer to the first part is false, then the remaining questions are greyed out or removed.

Furthermore, participants pointed out that the questionnaire was too long, and many of the questions were unnecessary. As a result, they were less inclined to finish the questionnaire in the interest of providing accurate information, and focused more on finishing the questionnaire for the sake of finishing. Since then, we have realized that our initial approach was incorrect. Questions should be short, concise, and to the point. Participants should not have to think for too long - the answer should immediately pop into their heads. In addition, questions should be focused on the issue. Minute details like gender, age, year of study, etc. should be omitted due to them not being relevant.

During the pilot testing we also gathered several constructive feedbacks from the TA and the students regarding our research plan. First, we learned that less emphasis should be put on focus groups or semi structured interviews as they are lengthy and most of the stakeholders are busy individuals. Therefore, we have decided to optimize our questionnaire as it is going to be our primary instrument. Another theme brought up during the interviews was the incorporation of *Security and Safety Measures*. Students noted questions such as what would happen if one refused to give up a seat? Also, if there's an after-hours reservation, then how can bad actors be prevented? Based on the received feedback we incorporated

Security and Safety aspects as part of the interview questions and the forms. We have also added Security actors as part of the stakeholders to be included at important stages.

Revised Research Instruments

Using the feedback from the pilot test and the tips from the TA's, we have revised the research instruments based on the explanation above. Revised research instruments are as follows;

Questionnaire (Google Form):

- <https://forms.gle/VQyPsUP2hYVdxakQ9>

Semi-structured interview (Questions to ask):

- Do you have trouble finding study space on campus?
- Which libraries do you go to the most ?
- Where do you usually sit within a library?
- What kind of area do you prefer to study within a library?
- What amenities do you prefer for selecting a study place.
- Do you eat food at the library?
- What kind of food do you find yourself eating the most?
- How often do you study on campus?
- Where do you study on campus?
- How long do you study for in a single session?
- Are you aware that study rooms can be booked on campus?
- Are you aware of how and where to book study rooms on campus?
- Have you ever felt unsafe while studying on campus?
- Is safety a factor when deciding a study spot on campus? Would day or night matter?