0M110 User Experience Design (Design Track A)
Research Plan
The Experience of Locating Faculty Members Inside the IPO Building

Group: 4
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Introduction

Although the classroom is considered the main point of contact between faculty and students, there is evidence that informal interactions taking place outside class can be more important. In fact, Endo and Harpel (1982) found that an increase in the frequency of informal interactions between faculty and students is associated with an increase in personal, intellectual and social outcomes.
However, several studies on the frequency and nature of student-faculty interactions indicate that most students don't take advantage of these interactions (Cotten, S. R., & Wilson, B., 2006). For this reason, educational institutions should be especially concerned with understanding and facilitating student-faculty interactions, especially out of class.
To identify the factors that may facilitate or hinder such informal interactions from taking place at a university setting, we study the experience of students deliberately trying to locate faculty members at the IPO building at TU/e. This building, home to the School of Innovation Sciences, is not only equipped with lecture rooms, laboratories and common areas, but also with the offices of faculty members, namely teachers. For these reasons, it is a place where student-faculty interactions, both formal and informal, occur frequently.

Research Plan

Research Methods Overview

For our research, we are using a total of three different methodologies from two perspectives, the students' and the faculty members'.
To gather information from the students, a combination of undisclosed observation and qualitative survey will be used. The observation will be carried out in the IPO building. During this process, we will focus on the physical behaviour of the students when they are looking for the faculty member. Furthermore, qualitative surveys will be spread out via Google Form to students who have previously searched for faculty members in the IPO building. With these two methods, we can

obtain data of both physical behavior (observation) and students' thought process (qualitative survey) to help us better understand the current experience of locating faculty member.
To understand the faculty member's perspective, we will conduct a semi-structured interview with them. These three methods can be carried out in parallel, since they are independent of each other. After gathering data from all three methods, the results will be combined to provide us with an understanding of the locating process where we can analyse the results into potential common themes.

Rationale

The idea behind the three methods is to gain understanding of the process of locating faculty member, or from the faculty member's perspective, being found. Each method provides a unique point of view for our research question. As a result, the perspectives from the main users (students and faculty members) in the process of locating faculty member will be covered, which will help us identify the potential problem or possibility of improvement, and lead us to the answer of our research question.

Undisclosed Observation

Compared to other observational methods, undisclosed observation is less invasive, which yields more realistic information regarding students' behaviour. For example, if we would perform shadowing, the participant might behave differently than in a normal condition. We cannot use time-lapse video because of the size of the targeted area. Also, because we don't know which of all the students are there to meet a faculty member, many observational methods are simply not possible.

Qualitative survey

To collect data about the thought processes and previous experiences from students, we chose from the following three methods: qualitative survey, interview, or focus group. Based on the amount of possible outcomes from the process of locating faculty member, we think that a larger sample could lead us to more diverse overview of the situation than a focus group or interview.

Semi-structured interview

Using an interview is the best option here, since setting up a focus group of faculty members requires too much planning in already busy schedules. Furthermore, comparing to other types of interview, semi-structured interview can provide us information about their usage of existing technology (for example: the board in the hallway of the IPO building with lights that indicate whether a faculty member is in their office) (close-ended questions) and their preference of making appointments (open-ended questions). Both types of questions are important for answering our research question.

Avoiding Biases

Although it is never possible to avoid all research bias, reducing important biases could potentially improve the quality of our results. Firstly, triangulating the results of three different research methods allows us to decrease biases that are inherent to each of these methods. Secondly by looking at both, the student and faculty member perspective, it is possible to triangulate results from both perspectives. Although triangulation accounts for some bias, there could still be biases within the research methods.

The semi-structured interview with faculty members can have interviewer bias and interviewee bias. Since we have four separate interviewers, it is possible that each interviewer might ask different questions that might consequently generate different results. Our solution is to provide each researcher with an interview guideline to ensure consistency. Interviewees might also be prone to only tell us what the interviewer and other researchers most likely want to hear. To prevent this bias, we will make sure to not directly reveal our research question in any of the interviews.

In the observation study, it is very easy for an observer to only write down results related to the research question that might lack objective observations. To minimize observer bias, we will conduct a pilot study where we will evaluate each observer's field notes for objectivity and conclusion 'leaps'. We will also each keep an observer diary to make sure any other influences during the observation day are accounted for.

The qualitative survey has to provide answers to our initial aims, or in other words we must test for face validity. To solve this, we will conduct a pilot with a small sample size to ensure that the results somewhat correspond to our research question. Another problem with the qualitative survey is that participants might have the tendency to generalize the process of location. To prevent this bias while answering the questions, we ask participants to only consider their latest experience of locating a faculty member.

Recruitment Strategy

Undisclosed Observation

The observations will take place in set time frames and start in the hallway of the IPO building. Whenever a person who looks like a student walks in, the researcher follows that individual to see whether this is indeed a student that is on their way to meet a faculty member. If it is not a student, or if the person reaches their destination, the observations are discontinued and the researcher returns to the hallway to wait for the next person.

Qualitative Survey

Each of the four researchers recruits at least five students to fill in a survey. Some possible participants are: classmates, classmates from previous courses, students in the IPO building, or students in the Intermate room. The recruiting can be done by directly asking, sending out emails, and distributing leaflets. The only condition is that they have previously tried to locate or meet a faculty member in the IPO building at least once.

Semi-Structured Interview

The interviewees are the two teachers from this course and two faculty members who previously guided two of the researchers with their Bachelor thesis. All of them are located in the IPO building. If there is any reason one of the chosen faculty members cannot participate, we will find a replacer who has had meetings with students and whose office is in the IPO building.

Planning

All the deadlines have a particular number attached to them. In the task division section, the number corresponds to the tasks that are required to be complete for that particular deadline.

Deadlines

Deadline #	Date & Time	Deadline
1	21-09-17 13:45	Hand in Research Plan
2	21-09-17 13:45	Feedback Session 1
3	25-09-17 08:45	Feedback Session 2
4	29-09-16 13:45	Feedback Session 3
5	02-10-16 08:45	Feedback Session 4
6	05-10-17 13:45	Upload User Research Data
7	16-10-17 08:45	Hand in Data Analysis & Design Concept
8	19-10-17 13:45	Design Exhibition
9	10-11-17 23:59	Hand in Final Report

Task Division

Deadline #	Task	Responsible Person
1	Brainstorming methods + research topic	All
1	Introduction	Luigi Altamirano
1	Research Methods Overview	Kevin Tang
1	Rationale	Kevin Tang & Liza Verhaert
1	Avoiding Biases	Raghav Mohan
1	Recruitment Strategy	Liza Verhaert
1	Planning	Raghav Mohan
2	Feedback Session	Raghav Mohan

3	Pilot Qualitative Survey	All
3	Pilot Undisclosed Observation	All
3	Schedule Interview Date with Faculty Members	All
3	Feedback Session	Kevin Tang
4	Send survey (minimum 5 per person = 20 responses)	All
4	Possible Interview + Transcription	All
4	Observation Day 1	Liza Verhaert
4	Observation Day 2	Luigi Altamirano
4	Observation Day 3	Kevin Tang
4	Feedback Session	Liza Verhaert
5	Possible Interview + Transcription	All
5	Observation Day 4	Raghav Mohan
5	Feedback Session	Luigi Altamirano
6	Materials and Method	Kevin Tang
6	Overview of the Archive	Luigi Altamirano
6	Compiling Raw Data	Liza Verhaert
6	Compiling Field Notes	Raghav Mohan
7	Affinity Diagram	All
7	Explanation of Theme	All
7	Rationale for Design Concept	All
7	Design Concept	All
8	Create Prototype	All
8	Design Workshop	All
9	Final Report	All

Dependencies & Extra Notes

The deadline #’s column shows which deadlines are related. Each dependency is justified in the third column.

Deadline #'s	Dependency	Why
1↔2	Finish to Start	To present feedback session 1, the research plan must be complete
2↔3↔4↔5	Start to Start	The feedback sessions are chronologically ordered but questions and problems can vary in time. Eg: Feedback 1 should start before feedback 2 but barriers in feedback 1 might be overcome sooner or later than barriers in feedback 2.
2-5↔6	Finish to Start	To archive the data, all the tasks in 2-5 need to be completed.
6↔7	Finish to Start	In order to analyze the results and make a design concept, all the data must first be gathered and archived.
7↔8	Finish to Start	To create a prototype and present findings in the design workshop, the data must first be analyzed.
8↔9	Start to Finish	Although the prototype need not be completed to start parts of the final report it needs to be completed before submitting the report.

1. Interview dates depend on scheduled appointments with the faculty member
2. Survey responses are based on response rate which might vary per researcher. The entirety of the two weeks is given for this.
3. The specific division of deadline 7 is dependent on the type of results we obtain from deadline 6. The design concept and the number of themes will provide us with the workload we can expect.
4. Since the criteria for the final individual and group reports are not yet available, it is not possible to divide tasks for deadline 9.
5. Furthermore, all the other task assignments are dependent on the deadline number and deadline dates and the tasks preceding the deadline number.

References

Cotten, S. R., & Wilson, B. (2006). Student–faculty Interactions: Dynamics and Determinants. Higher Education, 51(4), 487–519. https://doi.org/10.1007/s10734-004-1705-4

Endo, J. and Harpel, R. (1982). ‘The effect of student–faculty interaction on students’ educational outcomes’, Research in Higher Education 16(2), 115–136.