IT3010, Exercise 3

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Abstract

4.5 pages. Research Questions:

1: In which circumstance student use mobile apps for educational purpose?

2: What kind of educational activities has been done with mobile apps?

3: What kind of impacts does mobile apps has on student academic life?

Data Analysis Description

Data analysis can be done in many ways, e.g manually or by machine. The purpose of analysing data is to find new information. Data in itself is not interesting, but the information extracted from the data is. One way of doing data analysis is by manually reading and compiling information from the data in a series of steps. The process used here is described below.

Skimming is the process of quickly finding and sorting through a text. This results in a simplistic overview of concepts, content, and purpose. After skimming filtering is the logical next step. Filtering is an in depth analysis of the text where paragraphs of the text is filtered out on the basis of it's relevance to the research questions. If the selected part of the data has relevance it is marked, if not it is ignored. Some part of the data are more relevant than others, and some times only expressions from a paragraph is relevant.

Coding is the first level of abstraction. Where paragraphs are reduced to concepts. Often on a line by line basis, or on a paragraph by paragraph basis, depending on the amount of relevant data in the paragraph.

After the coding is complete, the coding is compressed to concepts. Codes might appear multiple times, they might be quite similar or overlap greatly.

These kinds of issues are eliminated in the process of compiling concepts. The concepts are often high level themes, or reoccurring codes that borderlines it's definition.

TODO FIGURE HERE:

Data Analysis

In the figure we can see that the relevant passages of text is marked by a bracket in the right margin. These blocks marks the paragraphs that are relevant for the research questions. Categories was derived while reading, as I had no existing theory to derive from. It was an inductive approach.

The data consists of five interviews, one passive observation, and two participant observations. The interviews, with questions, are planned and scheduled beforehand. This gives all the interviews a consistency. Much of the same information can be found in all the interviews. The one passive observation distinguishes itself as being the only data collection of it's type. Although, the data from this observation gives a perspective from the other inputs. The passive observation contributes to a wider view. A more distanced point of view that covers areas the two other methods provide don't. The participant observations are the most biased one, as the observer are interacting with the subjects. Notes can also not be taken during the observation, but has to be written down afterwords. This makes the observations biased by the observer. Although the participant observations can enlighten the use of mobile apps in interactions between people.

Skimming After skimming through the data the main aspects are quite clear. Use of mobile applications in education is the main theme of the data. Furthermore we have some concepts that reoccur. The most reoccurring concepts are communication, organization, and notes.

Filtering After filtering the text for useful sections it is obvious that there are few sections of importance. Most questions give inconclusive clues of the data. The amount of data that does not contribute to the enlightenment of the research questions is surprisingly large.

Coding By coding the data we get some phrases, or codes, that repeats through the data. The most significant ones are facebook, organize, notes, communication, availability. The coding was done by the 'Open coding' way of analysing text. The codes indicates that the data is very focused on a small number of codes and concepts.

Table 1: Observations. int=interview, p=passive observation, ap=participant observations

Concept	freq	int1	int2	int3	int4	int5	p	ap1	ap2
facebook	6	*	*		*		*	*	*
organize	4	*		*	*			*	
notes	3			*	*		*		
communication	7	*	*	*	*	*	*		*
availability	5		*	*	*	*			*

Identify concepts Concepts are derived from the codes. Similar and overlapping codes are combined into a higher-order label. From the codes descried in the previous paragraph we can see that it is difficult to find common traits among them. The codes can be seen as concepts in themselves.

Environment The environment for all observations were academically inspired. The interviews had academicals as subjects, while the passive and participant, observations were executed on campus in a setting related to education. The interviews have a closed environment, few distractions and a focused atmosphere. Passive observations have the opposite atmosphere of interviews, open and unfocused. Participant observations are somewhere in between the two.

Observations The concepts are organised in table 1. From the table we can see the emphasised concepts, and their frequency.

Continuing with the description of the found markers, they range from communication, the most observed concept, to notes, which is the least observed concept.

That communication is the most observed is not surprising. Communication is by far the most common action among humans. On the other hand it is peculiar that taking notes is the least common marker. One should think that students would take more notes with mobile devices.

The middle section with organize, facebook and availability comes in an increasing frequency. All the concepts are common activities in daily life and is to be expected of mobile app use. Again the distance to education is clearly present. Or rather the lack of closeness, which indicates that further observations might give indications of connections between app use and education.

Self-reflection

quantity and quality of data. The data set provided gives insight into app use on mobile devices. Although, how much insight it gives into the relation between mobile apps and education are up for discussion.

The quantity of data is quite small to say something conclusive. Also, it is not representative for the academic population. The passive observation session gives few data points as it is only one observation. Which means we cannot say anything about the quality of the observations while we have nothing to compare it to. The participant observations have ok quality. It is as expected. In teamwork one might not see lots of app use, which is ok. We should have had more observations here to. I more observations would give more examples of use for apps in group settings.

Quality wise the data is ok. But it could have been better. The interviews in the dataset are badly structured and badly written down, hard to read, and as a consequence hard to analyse. The interviews covers widely different cases with different questions. The questions should have been the same for all the datasets to be comparable. Passive observations in the dataset are limited, and few. The amount of comments in the passive observations are less than one every other minute. In a room with over 400 people it should be easy to note different observations. As for the participant observations, the setting might have been better. In the two observation sessions the number of actual observations are few, which is odd. On a normal day one could observe uses of mobile apps everywhere all the time. The participant observations seems to biased as the recorded use of applications is so low. Also, the lack of diversity of the used applications are interesting it's own way. Does it indicate that we use a very limited spectrum of mobile apps?

From the analysed data students only use mobile apps for taking notes. Most other use is for communication and organisation, which can be considered a personal day to day purpose. In regards to research question 1 we can note that the use of mobile apps for educational purposes are very limited.

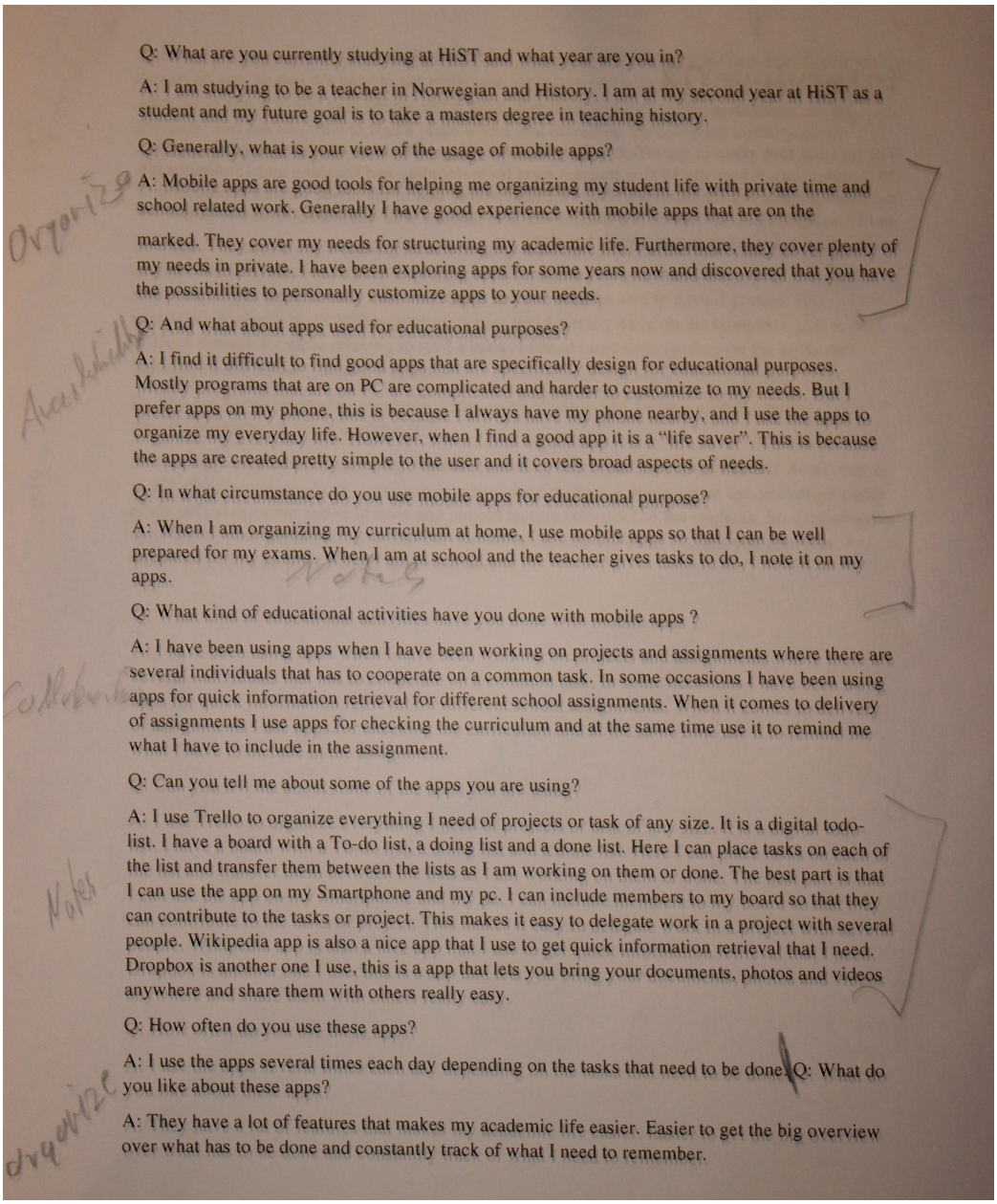
Research question 2 asks what kind of educational activities apps were used for. The simple answer is only notes. The more complex and inconclusive answer is that mobile apps are used in a variety of linked activities that to some extent has an effect on educational activities. An example of this is email, it is for example used to distribute curriculum and plan meetings. Another is facebook. These days everyone uses facebook as a platform for collaboration and communication.

As for the impact apps have on the academic life, it is moderate. The impact of mobile apps affect everyday life more than it does the academic life. This is considering a definition of the academic life as aspects that has

to do with activities directly linked to campus or the university. Here the definition of academic life is rather unsubstantial. It says nothing about the boundaries or interpretations is has. As an example a person that is a student, but is never on campus might use a wide array of different mobile apps, while a student that visits campus every day might not use any mobile applications.

In short summary the data is inconclusive and small. It should have been more data, and it should have been better structured. The research questions should be more precisely articulated, so that their meaning and aim would be clearer.

The analysis in itself is also probably biased with personal impressions and daily observations of mobile use.



Q: What are you currently studying at HiST and what year are you in?

A: I am studying to be a teacher in Norwegian and History. I am at my second year at HiST as a student and my future goal is to take a masters degree in teaching history.

Q: Generally, what is your view of the usage of mobile apps?

A: Mobile apps are good tools for helping me organizing my student life with private time and school related work. Generally I have good experience with mobile apps that are on the marked. They cover my needs for structuring my academic life. Furthermore, they cover plenty of my needs in private. I have been exploring apps for some years now and discovered that you have the possibilities to personally customize apps to your needs.

Q: And what about apps used for educational purposes?

A: I find it difficult to find good apps that are specifically design for educational purposes. Mostly programs that are on PC are complicated and harder to customize to my needs. But I prefer apps on my phone, this is because I always have my phone nearby, and I use the apps to organize my everyday life. However, when I find a good app it is a "life saver". This is because the apps are created pretty simple to the user and it covers broad aspects of needs.

Q: In what circumstance do you use mobile apps for educational purpose?

A: When I am organizing my curriculum at home, I use mobile apps so that I can be well prepared for my exams. When I am at school and the teacher gives tasks to do, I note it on my apps.

Q: What kind of educational activities have you done with mobile apps ?

A: I have been using apps when I have been working on projects and assignments where there are several individuals that has to cooperate on a common task. In some occasions I have been using apps for quick information retrieval for different school assignments. When it comes to delivery of assignments I use apps for checking the curriculum and at the same time use it to remind me what I have to include in the assignment.

Q: Can you tell me about some of the apps you are using?

A: I use Trello to organize everything I need of projects or task of any size. It is a digital todo-list. I have a board with a To-do list, a doing list and a done list. Here I can place tasks on each of the list and transfer them between the lists as I am working on them or done. The best part is that I can use the app on my Smartphone and my pc. I can include members to my board so that they can contribute to the tasks or project. This makes it easy to delegate work in a project with several people. Wikipedia app is also a nice app that I use to get quick information retrieval that I need. Dropbox is another one I use, this is a app that lets you bring your documents, photos and videos anywhere and share them with others really easy.

Q: How often do you use these apps?

A: I use the apps several times each day depending on the tasks that need to be done. Q: What do you like about these apps?

A: They have a lot of features that makes my academic life easier. Easier to get the big overview over what has to be done and constantly track of what I need to remember.

The figure shows how the coding of the data has been performed.