Research Methodology for Computer and Systems Sciences (MMII)

Hello,

Let us write our contributions here

Everyone please write your name below so that we can keep track of who has visited this document and who is actually in this group!

Group names Skype ID Phone (Optional)

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I have booked a meeting with the supervisor on the 15.4.2019 by 16:00-16:30 (Please join the meeting). The Teachers skype ID is: chen\_1845

Division of Task

Suggestions of research topics

We suggest the following research topics in the area of “digital tools for learning”.

1. The use of social media for learning

**2. Experience of distance courses (6.03.2019 decided)**

3. Experience of digital tools in campus teaching

4. The use of digital tools for self-study

5. Digital literacy of students

Here is our discussion/Task for the next skype meeting on 6.4.2019 by 1pm Swedish time

**Research question**

* **learners perspective**

**Interview questions are the same!!!**

Agreed with 8 questions

**Task 1** (Simon)

Research topic

Research question

- Research sub-questions (at least two sub-questions) Deadline 10am 7.4.2019

**Task 1 & Task 1 (**Soher & Shahzad)

Interview guide, Interview guide (Deadline 6pm 7.4.2019)

**Task 1 (Peilin)**

Start the introduction Deadline 11.4.2019 by 11:59 PM

Task 2 Supervisor support (all member) Deadline 15.4

Questions to Chen

1. I understand that we have submission in 6 days, so what do we submit?

2. About using the same questions

Task 3 ( Reference style throughout our work is harvard style.)

Everyone should produce about a half (½) paged report deadline is 17.4.2019 by 23.55 Please note that we have a submission 21.4.2019. Let’s keep to the deadline, also lets do a quality work. Also apply the intext referencing and supply the reference list

Division of tasks is shown below:

# **1.** **METHOD AND DATA (2-3 pages)**

Soher Deadline 17.4.2019 by 23.55

* State and justify the selection of research strategy (see part 1 in Denscombe, 2014), as well as research methods in terms of data collection (chapter 12 in Denscombe, 2014), sampling (chapter 2 in Denscombe, 2014), and data analysis (see Clarke & Braun, 2010).

Shahzad 17.4.2019 by 23.55

* Describe how the data collection, sampling and thematic analysis was performed. Be as open and transparent as possible.

Peilin Deadline 17.4.2019 by 23.55

* Describe how ethical aspects have been taken into account (see chapter 17 in Denscombe)

Regarding ethical aspects of the research paper, first of all, the form of the consent comes to the question relating to the confidentiality and security of attained data. The code of ethics which the researcher ought use are to be understood by both the researcher and the participant before consenting to the agreement or the start of the interview. Researcher is obliged to protect interviewees within the consent form, where interviewee agrees upon the disclosure of their individual identity . (Research ethics, Denscombe, p 147-151)

In the consent form, the interview guide outlines purpose of study in which it tells the participant what is the main content and aim of the interview which is a crucial part of the research method, then it tells the participant what forms of the results and data derived from the interview are condensed into. The participant have the right to remain anonymous and the data are kept in safe place, here indicating the private cabinet and locked up from others than the researcher oneself. Further, the risks are being told, however there may not involve risks, always. In addition, the benefits are listed such as the voluntary participation and withdrawal at any moment during the research project, however not including any compensation. Lastly, the legal aspects of the consent form indicates that the confidentiality is respected, the data that is obtained from the participant is safeguarded and used with a purpose that the participant knowingly allows.

Simon Deadline 17.4.2019 by 23.55 ( Plus I will proofread and put the documents together )

* You are free to use subheadings for the different parts (e.g. methodological approach/research strategy, data collection, coding and analyze, ethical considerations).
* Ground your choices in the course literature.

Task 4 Thematic analysis

Hello, lets submit our thematic analysis here deadline 19.4.2019 by 11: 55 (All times are Swedish time) Any volunteers to put them together?

Does this time work for you please share your comments

Task 5 Deadline Sunday 28.4.2019 by 11 55 (Swedish time)

Please choose 1 ( Try review the grading statement, answer the relevant question while doing your part) Indicate your choice by writing your name

1. Abstract (Shahzad) (Max 150 words)

Result analysis Manageable assignments - Complex courses (600 words)

Discussion ( 300 words )

* Reflect on the research carried out and discuss its contributions in relation to the research question. Most importantly answer the two research subquestion

SQ1. What are the users’ positive and negative experiences of distance learning?

(E.g. The users positive and negative experiences are x, x, and x, etc., Table 1 above) make some reasoning etc.

SQ2. What are the possible solutions to users’ negative experiences of distance learning?

1. Result and Findings Plus ( see below) (Simon)

Result analysis From Teamwork - Platform Issues (1 page, about 1000 words)

Proofreading /formatting/references/appendices

1. Discussions (Peilin) (300 words)

* Outline the practical and theoretical significance of the contributions and discuss ethical and social aspects.

Introduction (Try to answer the questions and ground your text in Literature) (300 words max)

1. Conclusion (Waqas Gul) (0.5 page)

Results analysis from Virtual collaboration skill - Technology dependant (max 1 page)

1. Future research (Sohar) (300 words)

Discussions (max 300 words)

* Evaluate your work. Identify, and discuss limitations of the study in terms of credibility, dependability, and confirmability (see end of chapter 16 in Denscombe (2014), you will also find support in the paper by Tracy (2010)).

(Simon will prove read the entire report fixing all parts and grounding them in the literatures, e.g. the choice of case study as our research strategy was wrong, as we didn’t do any case study, etc.)

Report Template

Here is my part (Simon)

The title: User’s experience of distance courses

Subtitle: Explaining/Evaluating the user’s perceptions of distance courses

Introduction

During the past ten years, distance education has dramatically changed the way structured learning educate people and how the instructor(s) transmit the pieces of knowledge to the students.[[1]](#footnote-0) Distance education is a transmission form in which students and teacher(s) have different locations and time zones. It is mainly web-based and web-enhanced digital platform in which courses are designated for anyone to join at anytime and anywhere - allowing the instructor(s) and the learners to interact with one another using non-traditional educational delivery platforms such as Moodle, which is an open source learning management system (LMS) developed by Martin Dougiamas in 2002. [[2]](#footnote-1) [[3]](#footnote-2) Moodle has helped educators worldwidely to establish online courses in a continuous path focusing on the construction of collaborative and interactive of the learning content.

Not only universities have created its learning contents online, few institutions such as Coursera, Edx and Codecademy has enabled universal education which means accepting more students who are willing to learn. The role of a student can be anyone, who wants to be benefitted from the distance learning experience.[[4]](#footnote-3) The increas~~ing~~ing participation of distance education concerns of reducing existing barriers that obstruct attending in distance education~~,~~. ~~and o~~ On the other hand would the provided services allow and ensure the accessibility to high-quality instructional learning contents.

**2. METHOD AND DATA**

Distance education at universities has grown over the years to become one of the most popular ways for international students to pursue a Bachelor’s or Master’s degree. This includes a diverse audience of learners from busy adults looking to upgrade their career, stay at home mothers, as well as young people who want to study abroad but can’t afford it. This modern way of learning makes us more curious to know about the users’ perceptions of distance learning. In this part shows the research strategy, data collection method, ethical considerations and analysis method which have been chosen for this research. In general there are many research strategies which help to reach the aim of research question like surveys, case studies and experiments (Denscombe, 2010). There are two type to structure the collecting and analyzing data obtained from different sources quantitative and qualitative research. A quantitative way is used to collect much amount of data while qualitative research cares about the quality of data. It is used the qualitative research in this study because this is about the students’ experiences of distance learning, the positive and negative issue and suggest possible solutions to make it better. Besides the case study strategy and interviews for data collection are the best for this research because they are suitable and feasible at DSV.

**2.1 Research strategy:**

As it is mentioned before case study is used as research strategy for this research because it suits for the situation, it means focusing on few instances and get the qualities of data by using qualitative research way. Also it is feasible to implement on DSV students who have online courses. By using case study strategy the researcher devotes all his or her efforts to researching just one instance, there is obviously far greater opportunity to delve into things in more details and discover things that might not have become apparent through more superficial research (Denscombe, 2010). Furthermore, this strategy is very good because it allows using variety of sources, variety of type of data and variety of research methods (Denscombe, 2010). This study is talking about the distance learning and aims to answer the research question “what are the user’s experiences of distance learning?”

The case study approach has many benefits such as it allows the researcher to deal with the subtleties and intricacies of complex social situations. Also it is less costly and time consuming (Denscombe, 2010). The disadvantages of case study are that the researcher needs to be particularly careful to ally suspicions and to demonstrate the extent to which the case similar to, or contrasts with, others of its type (Denscombe, 2010).

Other research strategy which could be used for this research is survey strategy. It is wide and inclusive coverage, it means the research should have a wide coverage- a breath of view (Denscombe, 2010). This type of strategy is not suitable for this study because the researchers focus on a small group of students at DSV that have experience of distance learning.

**2.2. Data collection**

For this research study, the data collection is done through semi-structured interviews which are one of the good approach to collect feelings,emotions and opinions data (Denscombe,2010). The semi- structured interviews are used to prepare some questions regarding topic and asked freely from the interviewee where they can explain more about the topic according to their own perspectives. All five interviews were conducted by each group member individually either on skype or face to face and recorded using smartphone. The questions were prepared before conducting interviews and time duration for the interviews varies from half an hour to one hour. While conducting interviews there are chances that a person who is interviewed might be affected by interviewer for instance how the interviewer explained to interviewee, how people might read and what is the overall thinking of the researcher about the topic. According to the Denscombe (2010), the interviewer should keep in mind that what is the age, gender and ethics while conducting interviews.

For this research study, the sample is quite narrow because the interviews person has been conducted from the same course at DSV. With narrow range of people to be interviewed there are less chances to lie during interview, more in depth data collection, insight experience and compact interviewee choices. One of disadvantage could be that it is more time consuming which is hard to minimize(Denscombe, 2010).

Others alternative method for data collection methods could have been chosen is surveys, where questions could be asked to DSV students what are their experience about distance learning. A survey is one of the best way to collect large number of data which can easily measured and give us statistical results (Denscombe, 2010). However interview are good to answer the research question because it involves individual opinions and experiences about the topic. Data collected through surveys would not be good for understanding issues or more better results for the analysis. To extract in depth knowledge and understanding about researcher, interviews are better option for data collection method.

**2.3 Data Analysis**

Thematic analysis method is used to analyse data collected through semi structured interviews. Thematic analysis is performed to identify codes and patterns in the form of categories and themes in the interviews. Thematic analysis is very effective research analysis tool to study meaning , expressions and opinions of the interviewee in semi structured interviews. This study is performed by collecting data through recording of real life experiences of the interviewees so Thematic data analysis is most appropriate for our study.(Braun & Clarke, 2006).

Two different approaches can be used for thematic analysis i, e inductive and deductive analysis. Themes are extracted directly from collected data in inductive thematic analysis. In deductive thematic analysis, analytical or theoretical interests in the area be investigated is used to derive analysis. (Braun & Clarke, 2006). The selection among two aforementioned approaches depend upon how coded will be extracted. In present study we will use inductive thematic analysis and manual codes derivation will be used instead of some code extraction tools.

According to Braun & Clark (2006) there are six steps to perform thematic analysis. Familiarizing with data is the first step to perform thematic data analysis and then generating initial codes is second step. Relevant data is sorted to search different themes in third step. A more in depth review of identified themes is performed to refine, divide of scrap themes in fourth step. In next step themes are refined and named to provide clear understanding and definition. In the last step is to prepare report in detailed and convincing manner. (Braun & Clarke, 2006).

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Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), pp. 77-101.

Denscombe, M. (2010), The Good Research Guide: For Small-Scale Social Research Projects (4th edition). Maidenhead: Open University Press.

The research problem

Discuss the problem that the thesis intends to address

Many of the existing universities and other institutions of learning some of which were founded since 2-3 centuries ago are still trying to retain the heritage, prestige they have acquired through the years. For these institutions, the conventional method of teaching which involves a face-to-face teacher versus student interaction is still highly valued. More so, the high ranked institutions are rather hesitant to give up the ego in terms of their perceived values among the populace. Therefore opening up their borders to the whole new world of distance learning is so far not resonating well with these institutions.

Nevertheless, lack of resources is hampering the progress that can be made towards adoption and implementation of distance learning. E.g. Lack of teachers-inadequate English-speaking teachers is preventing some potential universities from offering online courses, etc. On the other hand, many universities have fully embraced the so-called distance learning. As such, a lot of courses and programs which were impossible to study in the past due to timing, location or cost, are now being offered as distance courses/programs. But how have the consumers of distance courses perceived the services they are consuming? What are the students’ experiences of distance learning? Has it worked well or are there areas that can be improved? The providers of the distance programs are therefore interested to know the students’ perceptions of the very services they provide to them. (One reference should be added to this text)

Clarify if the problem is theoretical or practical

The problem which current research addresses is a practical problem because this research relies mainly on empirical data. Of course, the primary data is sufficiently supported by the secondary data (literature). Empirical data are information provided by the respondents who described the phenomenon according to how they have perceived it. The same is used to address the research questions and research aims. Further, the findings of this research offer practical values to the providers of distance courses in terms of looking at ways to mitigate challenges faced by consumers of distance programs. (One reference is needed in this text).

1.2 Aim and research questions

The aim of this research is to describe the users’ perceptions of distance learning.

Objectives

1) To classify users’ experiences into positive and negative experiences

2) To suggest possible solutions to mitigate negative experiences

In a scholarly study, research objective(s) are the crucial items which tell what will be done to respond to the research aim(s) (Göran, 2012, p. 53).

Research Question

The main research question for this study is: what are the user’s experiences of distance learning?

Research sub-question

SQ1. What are the users’ positive and negative experiences of distance learning?

SQ2. What are the possible solutions to users’ negative experiences of distance learning?

Göran (2012, p. 53) suggested that research questions reflect what was stipulated in research objectives.

Possible Interview questions (Semi-structured method)

1. In your opinion, what are the positive experiences of distance learning?

(Please tell both previous and current experiences)

2. In your opinion, please explain what are the negative experiences of distance learning

(Please tell both previous and current experiences)

3. How can these negative experiences you have described above be remedied?

4. Why do you choose to study through distance learning instead of the conventional way of attending day classes?

5. How have you benefited by choosing to study through distance learning?

6. What are you missing by studying through distance learning than conventional way?

7. Do you have any concerns at all regarding the qualifications obtained through online (e.g., quality issues, acceptability, etc.)?

8. What other things come to your mind when thinking about distance course?

With these questions, we are good to go already!

Qualitative data collection, semi-structured method

Date of Interview\_\_\_\_12.4.2019\_\_\_\_\_\_\_\_Type of interview \_\_\_\_\_One-on-One \_\_\_\_\_\_\_\_\_\_

Start time\_\_\_9:42\_\_\_\_\_\_ End time\_\_\_\_10:42\_\_\_\_\_\_\_ Total spent time \_\_\_\_\_\_ 1 hour\_\_\_\_\_

Interviewer \_\_\_\_Simon Ihegbu \_\_\_\_\_\_\_Interviewee \_\_\_Jonas Jaenicke (27 years old) \_\_\_\_\_

1. In your opinion, what are the positive experiences of distance learning?

(Please tell both previous and current experiences)

2. In your opinion, please explain what are the negative experiences of distance

Learning. (Please tell both previous and current experiences)

3. How can these negative experiences you have described above be

remedied?

4. Why do you choose to study through distance learning instead of the conventional way of attending day classes?

5. How have you benefited by choosing to study through distance learning?

6. What are you missing by studying through distance learning than conventional

way?

7. Do you have any concerns at all regarding the qualifications obtained through online learning (e.g., quality issues, acceptability, etc.)?

8. What other things come to your mind when thinking about distance course?

Thematic analysis

| Data Extract | Code | Theme |
| --- | --- | --- |
| I had not seen this before and I would not have been able to do it, working in a group though, one of our group members has a master’s degree in mathematics, she was really keen to share her insights, and so we were able to find a solution to the problem…  professors are always reachable, as soon as I wrote him an email on his email account, I got an answer within 24 hours | Group work              Teacher reachability | Positive expressions |
| and then I learned a lot by this, I guess, this went to a kind of multi-perspective and like diversity of backgrounds | Multi-perspective |  |
| I am happy that I can use my time flexibly, I am really, I love to learn and I love to study, I like to sit down and work on topics, but in the past, I felt pressured to learn on certain times | Flexibility |  |
| there is always these times are needed to organize the group or are needed to organize to find the room, change rooms, to learn about the lecturer, etc., these times are radically cut | Time efficiency |  |
|  |  | Negative expressions |
| you have already figured out that there is a term that you quite don’t understand, it just takes so much time to find an answer to this | Time wastage |  |
| I had a situation that I asked my lecturer, the problem was the terminology that I used in my question wasn’t as scientific as he used to communicate in this course | Incoherent writing/  communication | (this is connected to the preceding one) |
| Then we were doing a group work assignment, there were two people who were not showing up to the group work assignment | Non commitment |  |
| the problem with this comment functionality is that your lecturer doesn’t get email notification of your comment, so he didn’t notice that you commented | Platform issues |  |
|  |  | Solution expressions |
| lecturers should make sure that the assignments at the beginning of the first semester that is when people are still figuring it out that these are not too much too workload | Divide the assignments into manageable chunks |  |
| it would be helpful for the assignment is designed in such a way that you would be able to that you can drop workload out of it | Scalable workload |  |
| Let’s say that you have an assignment that you were supposed to do with 5 and you have five sub-tasks. So, the problem sometimes is that people drop out and leaves the group with extra workload. | Manageable group |  |
| So generally, I did not have any problem with my professor responding in time, and always responded with smaller issues 24hrs or even 12hrs and bigger issues they never took longer than 48hrs | Responsive |  |
| the only way to change this is maybe either by letting students pay but that is a regulation that the university cannot introduce, that needs to be decided on a higher stage, or you could select your student more rigorously | Solution to student drop out (charge fees, select rigorously) |  |
|  |  | Other themes |
| and I still had some projects to finish so that was really convenient way to study on a Swedish university also finishing my work project    it just went so seemingly and just adapted to my current life style | Convenient          Adaptability | Positive          Positive |
| I had a few important travels ahead of me that I wanted to do, with the on-campus master’s degree I would have either digital travel or arrange in a very complicated way | Flexibility to travel | Positive |
| then I found the master program to be interesting so I chose it because of that | Interesting | Positive |
| I travelled more than I expected to, I, just the freedom and the time flexibility and the freedom to study from wherever you want has an interesting impact on my life | Freedom to study from everywhere | Positive |
| Content wise, obviously what I am studying is complex and going through it, it’s just challenging and you grow with the challenges | Complex study | Positive |
| organizing yourself but also for learning in group that is a bit more distance | Non-face-to-face Collaborative learning | Positive |
| Socially, looking at social skills and soft skills through the group work you a bit about how to behave and also the interesting part here is that we don’t see each other and that takes away the prejudgment that you have about people | Learning social skills and soft skills | Positive |
| but there is also something that is called logic that describes a way of thing and a way of expressing and I understand that this is enhancing my personal growth | Personal growth | Positive |
| for me this master’s degree is more about the master degree itself, it’s about the paper, it’s about the diploma | Degree reputation | Positive |
| …first of all just social context I will most likely not meet friends through this, in the past you are building up the social network through your university | Missing the personal connection | Negative |
| quality wise this account again you can have good on-campus classes but you can also have really bad on-campus classes, this university is one of the better | Good quality | Positive |
| I think there will be people who say the qualification is not as good, like they won’t accept it as such a good qualification | Acceptability | Positive/Negative |
| Meeting future employees or so that is something that is limited through the distance learning course | Less employee contacts | Negative |
| to work alone that is something that could come up for others or to motivate myself | Self-motivation | Positive |

| **Themes** | **Categories** | **Initial Codes** |
| --- | --- | --- |
| Type Of Study | conventional learning      ------------------------------      Distance learning | On campus.    Good for complex courses.    Easy getting knowledge.  ----------------------------  Online courses.    Digital material.    Recorded Lectures. |
| Experience of distance learning | Positive effects          -------------------------      Negative effects | Flexibility.    Working professional.    Doing any time.    Acknowledgement for distance learning.  -------------------------  Less interaction with teachers and student.    Difficult explaining all ideas.    Less taking the essence of time seriously by student. |
| Better distance learning | Good communication | Active participation of teachers with the students.    Voice and video chats with teachers. |

| **Themes** | **Categories** | **Initial Codes** |
| --- | --- | --- |
| Communication | Collaborative learning | Unavailability |
| Flexible time slots |
| Lack of interaction |
|  | Personal experiences | Bad experiences with online courses |
|  |  | Positive and negative experience of Distance learning |
| Ways of learning | Traditional learning | Traditional way of learning |
|  |  | Difference ways of learning |
|  | Distance learning | Video lecturers |
|  |  | Positive impact of communication |
|  |  |  |
| Impact of distance learning | Negative aspects |  |
|  |  | Mitigating issues with distance learning |
|  |  | Less collaboration |
|  | Acceptance | Acknowledgement for online courses |
|  |  | Difficulties with job market |
|  |  | Accreditation problems |
|  |  | Recognition of the online courses |
| Issues in Distance learning | Issues according to Students | Work Load |
| Time consuming |
| Course management issues | Lack of interaction with teachers |
| Lack of responsibility |
| Geographical barriers |

| **Themes** | **Categories** | **Codes** |
| --- | --- | --- |
| Type Of learning | Traditional learning  ------------------------------  Distance learning | More interactive  Easy to understand  ----------------------------  Online platform  Recorded Lectures  More efforts |
| Impacts of distance learning | Positive effects  -------------------------  Negative effects | Flexibility  Time saving    Money saving  Manage other activities  -------------------------  Less social  Less interaction  Difficult for some students  Technology dependent |
| Improving distance learning | Study materials  -------------------------  better communication | Easy guidelines  -------------------------  Text chat link  video link |

1. Charlotte N.G. Marina S.M. Handbook of research on Educational Communications and Technology. Available online: <https://www.taylorfrancis.com/books/e/9781135637378/chapters/10.4324/9781410609519-22> (10.04.2019) [↑](#footnote-ref-0)
2. Cole J. Helen F. Using Moodle: Teaching with the popular open source course management system. O’Reilly Media, Inc 2007. Available online: <https://books.google.fi/books?hl=en&lr=&id=wfPPb1m0G6EC&oi=fnd&pg=PR5&dq=moodle+&ots=vSBlLj_FIz&sig=Y7dB2pZuxgRuzR4p66zhqxKtU9o&redir_esc=y#v=onepage&q=moodle&f=false> (10.04.2019) [↑](#footnote-ref-1)
3. Moodle. Releases. Available online: <https://docs.moodle.org/dev/Releases#Moodle_1.0> (10.04.2019) [↑](#footnote-ref-2)
4. Caswell, Tom, et al. Open content and open educational resources: Enabling universal education. The international review of research in open and distributed learning 9(1) 2008. Available online: https://doi.org/10.19173/irrodl.v9i1.469 (10.4.2019) [↑](#footnote-ref-3)