EXPERIENCES OF DUTCH ADOLESCENTS ENGAGING IN ONLINE EDUCATION AT HOME DURING THE CORONA PANDEMIC

Name: Sanne Koning
Student number: S4588339
Supervisor: A.T. Oosterhoff
Date: 11-06-2021

Faculty of Spatial Sciences

ABSTRACT

Since the worldwide outbreak of the Corona virus in the beginning of 2020 many measures have been taken to stop the spread. One of the taken measures is the shift from physical education to online education at home. Dutch adolescents suddenly had to switch from regular lessons to learning behind a screen at home. This new situation poses challenges for the adolescents and their home environment. The meaning of home has not been studied before in combination with online education at home. Therefore, this research investigates the question: *"How do Dutch adolescents aged 14-18 engaging in online education experience the meaning of home during the Corona pandemic?"*

To investigate the concept of meaning of home, 'physical home' and 'social home' were used alongside the transition to get a better understanding of the experiences. This research adopted a qualitative research method, utilizing semi-structured in-depth interviews to collect the data. A total of 8 participants were interviewed from 3 different schools. When analyzing the data in an inductive manner the inductive code tree was developed. The results showed that the adolescents experienced a change in the meaning of their comfortable home environment. From the analysis of the transcripts three inductive codes were identified: loneliness, boredom and not enjoying being at home. The insights from this research together with further broader research, enable schools to improve their support for adolescents experiencing feelings of loneliness and boredom.

TABLE OF CONTENTS

1 BACKGROUND

Since the worldwide outbreak of the Corona virus in the beginning of 2020, the lives of many people have changed tremendously. During the Dutch press conference on March the 15th 2020, there were new measures taken to stop the spread of the virus in the Netherlands. One of the measures was to close schools ranging from elementary to higher education (Rijksoverheid, 2020). From the 16th of March schools were asked to organize long distance education. Children and adolescents could follow their lessons from home on a laptop or computer.

From the first lockdown onwards, online education has been the main form of education sometimes combined or alternated with physical education. Teachers and education organizations are concerned about the quality of online education (Steenbergen - Hu & Cooper, 2013). The main reason to be worried is the learning delay children will develop. Online education could however have positive effect when used properly, the programs should not be too long and are most effective for older children since they possess better technological skills (Ma, et al., 2014). Due to the Covid-19 measures, children only engage in online learning which makes the programs too long, not varied and unmotivating. Children must participate in lessons every day and if these are not effective it will cause learning delay. (Kortekaas-Rijlaarsdam, et al., 2020)

Online education at home is not developed for the corona crisis, it has been around for many years on a voluntary basis (Dahm, 1996) . There are three reasons why home education is seen as an option over formal education. For several families, home education is the most fitting choice regarding their decisions on lifestyle, education, and childhood. They position themselves as "the other" in opposition against the state and institutional structure, this is the reason why they reject regular education. For other families home education is a social choice. There are no problems with the structures of regular education. The issue is social interaction associated with schools, teachers, and children. The values communicated with these interactions are not on par with the family's beliefs. Some families are determined that they are responsible for their children's upbringing both socially and morally. Other families make this decision due to bullying concerns and thus due to social reasons. The third option is not a choice but more an escape route. Their children are removed from school for reasons concerning emotional breakdowns and self-harm. Here home school is seen as a period of recovery with the intention to return to school. (Morton, 2012)

In these circumstances home education is often a voluntarily made choice instead of forced upon a large group of adolescents. The adolescents are not prepared for online education at home, what sometimes causes problems. The physical environment for online education is frequently described as quiet and clean where they can study peacefully. For some adolescents this is problematic since there is no silent place in their home. Next to the physical place is the importance of an internet connection, there is a small number of adolescents that has no access to internet at home. These issues are leading to learning delays and in the worst cases; exclusion from education (Arnou, et al., 2020). Along with these problems goes the interaction with other adolescents and teachers. There are no physical interactions which leads to a lack of physical interaction. Especially the lack of teacher interaction plays a role in the impact on the learning potentials of the adolescents (Onyema, et al., 2020). During the pandemic the role of teacher and the interaction regarding this role cannot be embraced by the parents due to their own circumstances and/or specific competences. Next to the lack of interaction is the way different age groups handle the situation, a student will manage better than a high schooler (Voas, 2020). All these changes are experienced within the home environment and could potentially influence the meaning of home. A lot of data can be found on the concept of home, but not in combination with online lessons for adolescents. This research aims to further close this research gap through theory building. Therefore, the theoretical relevance of this research is to further fill that gap.

2   RESEARCH PROBLEM

The aim of this research is to explore if there is a change in the meaning of home for Dutch adolescents aged 14-18 engaging in online education during the Corona pandemic, through their experiences. The results of this research are helpful for schools who provide online education and want to know how adolescents at home experience this. Understanding the meaning of home is important to investigate the experiences of the participants. With the results of this research, schools could potentially help adolescents that have issues with online education at home. The focus of this research is to find out if there is a change in the meaning of home for adolescents, so the definition of the meaning of home can be further expanded. Therefore, the central research question is:

"How do Dutch adolescents aged 14-18 engaging in online education experience the meaning of home during the Corona pandemic?"

The central research question is supported by one secondary question. The purpose of the secondary question is to define the meaning of home in the theoretical framework. This concept will serve as the base for developing the interview guide. The focus of this research will mainly be on the meaning of home for adolescents that engage in online education during the corona crisis. Therefore, is it important to formulate a clear definition of the meaning of home. This meaning will be used throughout the research to compose the interview questions and to clarify the results derived from the interviews. The secondary research question is:

"What is the meaning of home?"

2.1   STRUCTURE OF THESIS

This thesis is structured in the following manner: Chapter 3 will explore the theoretical concepts connected to the topic in the theoretical framework. After investigating the concepts, they will be visualized in the conceptual model alongside an explanation of the model. The last paragraph of chapter 3 will describe the expectations of the research. Chapter 4 explains the methodology, the discussion of the research method and data collection instrument. It describes the ethical considerations regarding the participants and researcher too. In chapter 5 the results are presented alongside the quotes from the semi-structured in-depth interviews. Chapter 6 contains the conclusion and discussion of the results, together with the strengths and weaknesses of this research. The last paragraph explains the recommendations for further research.

3   THEORETICAL FRAMEWORK

The focus of the research is about the meaning of home and how this is experienced by adolescents following online education during the Corona pandemic. To understand this, the meaning of home must be uncovered.

The home environment consists of 3 dominant functions: the physical home, the social home, and the personal home (Tanner, et al., 2018). The physical home is the appearance of the dwelling, the structure built from raw materials (Sixsmith, 1986). The social home covers the relationships with other people, for example family members or a significant other. They do not necessarily have to live in the same physical environment because they could be neighbors or friends, exerting influence from outside (Sixsmith, 1986). The third dominant function of the home environment is the personal home, this occurs as a central point in someone's life. This referred to as a place that's familiar, secure and as a place of belonging (Desprès, 1991). The meaning of home is temporal and therefore can change due to experiences in the physical, social, and personal home environment (Werner, et al., 1985).

In this research the meaning of the physical home is important to contribute to a helpful learning environment. Creating a learning environment at home should start with a place, since learning is never placeless (Gieryn, 2000). The place should be quiet, secluded from other family members and controllable for the adolescent (Arnou, et al., 2020). The physical space should motivate the adolescent to learn and participate in learning activities (Yang, et al., 2020). This starts with entry requirements such as a chair, a power connection, a computer, and a place to store books and papers, this will bring structure and order in the room (Tondeur & Herman, 2019). When the physical surroundings are not meeting the requirements for online education it could influence the experience of a learner at home. The social home is also important for this research. Adolescents often live at home with other people living in the same physical environment as them. The relationships with these people are important because it could have an influence on their meaning of home. The personal home is about a place of belonging. Since this research focusses on online education in combination with the meaning of home, the concept of the personal home will be disregarded. To clarify: this research focusses on the concepts; "social home" and "physical home".

Online education is comprised as the supreme way of education at the moment (Mishra, et al., 2020). The online learning activities that are received by adolescents are emulating the same activities generally done within the classrooms, little lessons are made with the home environment in mind. Next to the activities there are many distracting external factors, such as various social media outlets. There is a need for the extrinsic drivers of school together with routine, consequences, and easy access to peer and teacher support (Yates, et al., 2020).

There appears to be a vast amount of information about the meaning of home in different situations. This is equal for articles written about online learning and the consequences it might have. Taking this into consideration, the knowledge gap identified here is about the missing connection of the meaning of home and online education. With the focus on the 2 functions of home, physical and social, and how these might be influenced by online education for adolescents. This research seeks to further close the knowledge gap.

3.1 CONCEPTUAL MODEL

The conceptual model will be used as a guide for the data collection and analysis. The model is based on the concepts and theories found in the theoretical framework.
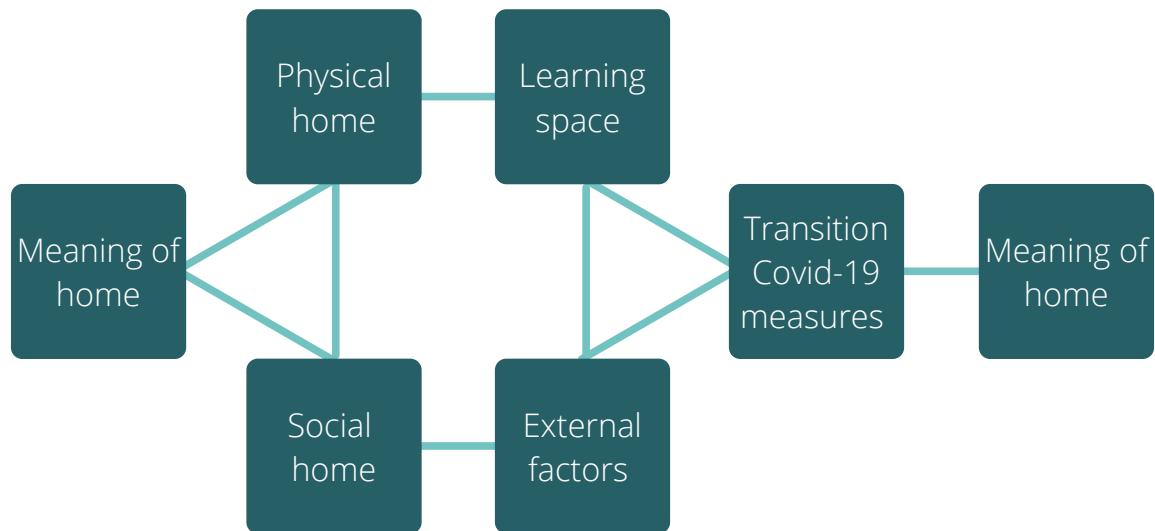

FIGURE 1 CONCEPTUAL MODEL

The focus is the meaning of home based on the two categories the physical and social home (Tanner, et al., 2018). Connected to these categories are the two concepts learning space and external factors. Learning space is the physical learning environment place where an adolescent engages in online education. The external factors could be distractions, like Netflix and social media but these could be tasks received from other family members. These two concepts are changed due to the Covid-19 measures which is the transition the adolescents go through. This transition could possibly change the way Dutch adolescents experience the meaning of their own home.

The concepts will be used as topics to structure the interviews. After the data collection, the data will be analyzed in an inductive manner. Codes will be produced by combining multiple quotes under one comprehensive code. These codes will later be grouped under broader categories to form an inductive coding tree.

3.2 EXPECTATIONS

The main expectation of this research project is that there is a change in the meaning of home for Dutch adolescents engaging in home education. The forced change from the regular classrooms to online education at home will most likely change the way adolescents perceive their homes. The gross part of their daily social interaction is experienced within the physical boundaries of their homes. This could result in emotional issues that adolescents have due to the corona pandemic. Emotional issues such as boredom, loneliness, stress and possibly anxiety. These issues could potentially be projected in the home environment since the adolescents are at home all the time. At the end of this research, the researcher expects to find a change in the meaning of home for Dutch adolescents aged 14-18 engaging in online education at home.

4   METHODOLOGY

4.1   QUALITATIVE RESEARCH PARADIGM

This research adopted a qualitative method. The qualitative research approach provides valuable and rich non numerical data for specific situations and reveals experiences and perceptions of people dealing with unique events (Sofear, 1999). The interpretive paradigm emphasizes on the subjective experiences of the participants (Thomas, 2010). This research problem focusses on the experiences of Dutch adolescents engaging in online education from home. Therefore, the qualitative research method is most fitting to gain insight in their experiences. Qualitative data collection can be performed in different ways such as interviews, documents, videos and many more. Quantitative data collection has specific rules one should follow, qualitative data collection does not know an explicit set of rules (Graue, 2015).

4.2   INCLUSION CRITEREA AND SAMPLING

The target population for this research are Dutch adolescents that engage in online education due to the Corona pandemic. The adolescents are aged between 14 and 18 and are still living with their parents or caretakers. They must follow online education at home for more than 3 weeks continuously. This research has investigated adolescents going to 3 different high schools in Sneek. The participants were carefully selected through snowball sampling. Every potential participant was asked if they knew more possible participants willing to participate in the research. The snowball sampling method is fitting since the target population was slightly hidden (Johnson, 2014).

4.3   DATA COLLECTION INSTRUMENT

To collect the data a semi-structured in-depth interview guide has been created (Appendix 1). Semi-structured interviews are flexible and structured enough to provide rich data for the specific dimensions of the research question (Galletta, 2013). With the theoretical framework and the conceptual model (Figure 1) in mind the interview guide was realized. The concepts from the conceptual model were operationalized to create interview questions divided under three topics. Due to the current Covid-19 measures, all the interviews were conducted online through various media outlets such as FaceTime, Google Meet and Skype.

4.4   DATA COLLECTION METHOD

The focus of the data collection was to acquire primary in-depth data from Dutch adolescents experiencing online education from home. The interviews were conducted in Dutch to make the participants feel comfortable since it is their native language. The participants were able to choose the media outlet they were comfortable with for the interview. The interview was audio-recorded only to protect the adolescent's identity. Once the participants did not present new data, themes or codes the saturation level had been reached (Fusch & Ness, 2015). Through the snowball sampling method many possible participants were found, 8 of them have participated in the semi-structured in-depth interviews that lasted approximately 35 minutes.

4.5 QUALITATIVE DATA ANALYSIS

After conducting the interviews, the audio files were transcribed in Microsoft Word. To analyze the transcripts, they were uploaded into Atlas.ti. This research has adopted an inductive research approach since there is only little literature to be found about this specific topic (Streefkerk, 2019). The transcripts were analyzed in different rounds, in the first-round pieces of text were carefully selected when they concerned the research question, this was done in an inductive manner. In the second round the highlighted pieces were discussed, "What did the participants mean?". The last round focusses on grouping the pieces together and labeling them under one code. These codes were grouped into a category and eventually under the super code. Most categories were derived from the theoretical framework and the conceptual model (Figure 1), inductive codes were also found during the analysis. The final summarized code tree can be found in Appendix 3.

4.6 RESEARCH ETHICS

This research focusses mainly on underage participants; therefore, an information letter and consent form (Appendix 2) had been sent to the parents or caregiver of the participant. In one case the participant was of legal age and able to provide consent himself through the information letter and consent form. Due to the Covid-19 measures, the information letter and consent form were sent through mail to the participant or his or her parents. For the young participants the parents were asked through email whether they wanted to go through the information letter with their child to ensure that they are well informed about the purpose of the research.

To minimize the risk of doing harm to the participants, their names were replaced for anonymity (Oliver, 2010). If the participants felt the need to withdraw from the research they could do so at any given time during and after the interview. To protect the data, the audio files and transcripts were stored on an external password protected hard drive. After analyzing the data these files were deleted and only the analyzed parts were viewed by students and two supervisors from the University of Groningen where this research is part of.

5   RESULTS

This research aims to investigate the experiences and perceptions of Dutch adolescents aging 14 to 18 engaging in online education at home during the Corona pandemic. A total of 8 semi-structured in-dept interviews have been conducted, this data provides an insight in the perceptions of the participants in their homes. It also illustrates how they felt before and during the Corona pandemic.

TABLE 1 PARTICIPANT CHARACTERISTICS

Participant	Age	Gender	School	Level	Year
Annie	14	Girl	RSG Magister Alvinus	Havo	2
Bob	15	Boy	Nordwin College	Vmbo-t	2
Claudia	16	Girl	CSG Bogerman	Havo	3
Dylan	14	Boy	Nordwin	Vmbo-t	2
Elsa	17	Girl	RSG Magister Alvinus	Havo	4
Fiona	15	Girl	Nordwin	Vmbo-k	3
George	18	Boy	RSG Magister Alvinus	Vwo	6
Henry	16	Boy	CSG Bogerman	Havo	4

The characteristics of the 8 participants that cooperated in this research can be found in Table 1. The ages of the participants are in between 14 and 18 years old. Of the participants there are four boys and four girls from different ages, education levels and schools. All the participants were engaging in online education for more than three consecutive weeks.

5.1   THE TRANSITION

The home is an important place for young Dutch adolescents, it is often seen as a positive place where adolescents like to be (Hopkins, 2010). However, due to the unfortunate event of the Corona pandemic and the measures taken to stop the virus this has changed for some participants. When asked about how the participants experienced the transition from physical lessons to digital lessons, they responded.

Henry: "Let's see, ehm the first few weeks were still nice because friends and I were still joking about the fact that we are at home, we can lie in bed, it was all new of course so all still funny. But after a while I thought I really miss my friends and actually also miss school, while I didn't think I would miss school because I always prefer to say; "Bye, I'm going home!"

George: "I enjoyed going to school, and then suddenly school is at home. That is quite alone because I am an only child, so coming from sitting with friends in a classroom and going to sitting alone at a desk is very lonely"

The responses to this question varied. Some participants enjoyed online lessons at first and others experienced feelings of loneliness from the beginning. The feeling of loneliness was found as an inductive code. A similarity in all the responses was the lack of social relations with friends and classmates outside the home environment. According to Sixsmith (1986), the social relationships built around the home environment are an important factor in shaping the meaning of the social home. When social relations with friends diminish, the meaning of the social home undesirably changed for the participants.

5.2   THE PHYSICAL HOME AND LEARNING SPACE

All participants were able to meet the requirements to engage in online lessons at home.

The interviews showed that all participants had their own bedroom, which is important to develop autonomy as an adolescent. The bedroom is seen as a place where they are in control and give meaning to (Hopkins, 2010). Most participants were able to engage in online lessons, albeit that some needed to make slight changes. When asked about their current workplace in the house, they responded.

Annie: "I usually did that in the kitchen, but because we now are at home much more, we bought a small desk for my own room, so I now have the option to follow lessons in the kitchen or in my own room. If I go to school again, I will do my homework in my own bedroom since I have the space there"

Another participant found a different solution to cope with online lessons in the home environment. She was able to use the work office from her parents. The role of parents is a code found under the code category called family.

Fiona: "Euhm, I now work from a place we call the Office, that is where my parents usually work from. Since I have to follow the lessons from home, they offered me to follow them from the Office. My father has to be at work during the day, so I am able to use his computer."

Besides adjusting the workspace, many participants noticed a change in their physical home. They moved to one specific place to engage in online school. This specific place connects with the physical home of the adolescents and was perceived as quiet and comfortable (Sixsmith, 1986). This is also in line with Tondeur & Herman (2019) who describe the entry requirements of successful online education. Some interviewees mentioned that they did not have such a specific place to follow their online lessons, they experienced a less pleasant online school environment. This shows that the set requirements mentioned by Tondeur & Herman (2019) are important for a suitable learning environment at home and the experiences gained by the adolescents.

Regarding the sudden change from physical school to digital school, questions were asked about the home environment and if the interviewees experienced a change. As described above about the physical home and differences between interviewees, the one's not having a dedicated place experienced an overall less pleasant home environment. This is mentioned in the following quotes:

Bob: "I used to like it at home a lot more because you are less at home. Before this you would come home and go to your room to chill. Now you do not want to be as much in your room since it has a boring school atmosphere. Now I just want to go outside to friends, then you are out of the home for a quick moment"

Elsa: "I think that the home is a bit more serious about school now, that makes it a bit more boring on the other hand, well, it just changes it. I do not know exactly, but usually home is about the fun things and less about the serious school stuff, so that's a little difficult.

Claudia: "Yes, we still do nice things at home, but because I have lessons all day I will go outside sooner to do something fun. We used to stay home and play a board game for example, but now we would head to the beach to play with the dog"

Henry: "Yes, actually you just came home after school and then I went to play games with a friend in my room, nowadays you are in your room being busy with school. So that is all a bit more serious because normally you were going to do the nice things there"

5.3   THE SOCIAL HOME AND EXTERNAL FACTORS

Everyone who participated in the research was living in the parental home, meaning that they do not live independently. Most participants were living with parents, siblings and/or pets in their home. One participant indicated that he had no siblings or pets, he lived with his mother. Since the participants are living in the same physical environment as their family, family members can exert influence on them. According to the participants, their parents and siblings occasionally interrupt their lessons for various reasons.

Henry: "My mother always ensures that when I have class at half past eight, that I am sitting there, that I do not oversleep, she will check it before she does anything else.

Dylan: "My parents want me to take school seriously, so they sometimes check what I am doing. When I look like I am busy it's okay, but If they find me doing other things, they are disappointed."

There is a clear pattern of parents supporting their children, but some participants experienced this as being monitored by their parents. The inductive code monitoring is placed under the code category family. When parents interrupt their child, they exert influence on their meaning of the social home. The social home delves into the relations around the home, due to the supporting nature of the parents these could be impacted negatively (Sixsmith, 1986). According to the interviewees, they did not mind being monitored by their parents; therefore, the social meaning of home is not impacted. Besides being monitored the participants possess a good relationship with their parents.

George: "Well at home was a very nice place actually, we have a beautiful house and a beautiful garden where we could sit in. I have a good relationship with my parents so yeah, basically when I got home from school it was always nice to come home. My parents of course want me to do well in school but there is room for fun things like uhm, some fun board games of going outside together."

According to the participants they were missing their friends too. Due to the restrictions friends are not allowed to visit, this leads to the participants living more at home than usual.

Fiona: "Um, I think that since everyone is at home it changes a lot at home. Normally my mother was at work, she is now a lot at home, I am also a lot at home. I used to go to school and after school be with friends. When we are allowed to sport again, I can see them again too. But now I just live a lot at home."

Bob: "Yes, it does feel more like school now because you are busy with school a lot here, normally you were also doing other things like playing games at your desk and besides gaming I was never in my room. I used to be outside with friends all the time, now I am just inside and upstairs in the house all the time."

The monitoring parents who support their children during online education did not lead to a change in the meaning of the social home. However, the lack of social relations with friends and peers did change this meaning for the participants. This creates a lack in enjoyment in and around the home for the interviewees which ultimately results in a decrease in the social meaning of the home *(Tanner, et al., 2018)*.

6   CONCLUSION

The focus of this research was to investigate in the experiences of Dutch adolescents engaging in online school due to the Corona pandemic. To explore the experiences of the adolescents, a qualitative research method was used in this study. To collect the data in an appropriate manner, semi-structured in-depth interviews were fitting for the purpose of this research. The core research question to answer is: *"How do Dutch adolescents aged 14-18 engaging in online education experience the meaning of home during the Corona pandemic?"*

The participants experienced the sudden shift of physical education to online, remote education. The experiences were varied, some participants enjoying online school and others immediately disliking it. After the transition both groups dislike the idea of online education. Besides online education, nearly all other forms of connecting physically with friends and family outside the house are discouraged. This negatively impacted the social home since the daily social interaction takes place within the familiar setting of the family home (Sixsmith, 1986). Multiple participants admitted that they were missing their friends and classmates, this was the main reason for a decrease of the social home. This causes a feeling of loneliness and boredom for some participants. Other participants mentioned feeling demotivated due to the lack of peer support (Yates, et al., 2020).

All participants engaged in online education from their home, most of them in their bedroom, a few in the kitchen and one in a home office. Prior to the Corona pandemic, these spaces in the home environment had a certain meaning to every participant. Due to the new experiences within the familiar spaces this meaning has shifted, according to the participants. Multiple participants experienced feelings of boredom and loneliness in their safe bedroom environment. Others reported that the atmosphere changed into a school or more serious atmospheric feel. The feelings of loneliness, boredom and not enjoying being at home appeared to be important throughout the analysis. These three themes should be added to the existing conceptual model to further develop theory about the meaning of home for adolescents.

Concluding and answering the research question, the unexpected shift from physical education to online education caused a change in the meaning of home for the participants. Many reported the home as a pleasurable environment where they could meet with friends and do fun activities. During the Corona pandemic the meaning of their home environment changed. This is in line with the experiences of participants about the home becoming a place where they are too often. This has changed the meaning of home for the participants.

6.1   STRENGTHS AND WEAKNESSES

During the research certain disscisions were made. Firstly, the thesis was written in English language instead of the Dutch language. The interviews were all conducted in Dutch language since it is the native language of the participants. It is advisable to write the research in the same language as the participants were interviewed in since translating Dutch to English could possibly lead to loss in the true meaning of the participants answer.

Secondly, this research was influenced by the Covid-19 regulations. The participant recruitment and data collection were conducted online. Participants did not mind being interviewed online, but it did lead to some technological difficulties while interviewing. All participants were interviewed from a familiar place which led them to be open and honest about their experiences, since they provided the researcher with meaningful information. It is believed that the online data collection has not influenced the results of this research in any way.

The main strength of this research was the data collection. Before being able to gather data from the young participants, consent was required from their parents. This requires a little extra effort to contact the parents through email and explain the purpose of this research. After consent had been acquired, the participant was ready to be interviewed. Every participant received an explanation of the purpose of the research at the beginning of the interview adjusted according to his or her education level and age. These efforts have led to wonderful data collection.

6.2   RECOMMENDATIONS FOR FURTHER RESEARCH

To investigate the experiences of Dutch adolescents engaging in online education from their homes even further it is recommended to consider a broader area. This research focused on the city of Sneek which is rather specific. To get a better understanding of the experiences of the adolescents, a municipality or province could be considered. This to extend on the meaning of home for adolescents engaging in online education in the Netherlands and thus developing more theory about this meaning. Further research could also investigate in the possible differences between rural and urban areas. In this research all participants were living outside the urban area. To expand the conclusion, the adolescents in urban areas should also be studied. This might create a broader understanding of the experiences of adolescents engaging in online education from home. The collected data could be useful to develop theory about the meaning of home for adolescents engaging in online education. This theory might be interesting for schools wanting to build policies for adolescents engaging in online education. This will enable schools to support adolescents, feeling lonely or being bored, better in the future.

7 REFERENCES

Arnou, C. et al., 2020. *Hoe creëer je thuis een krachtige leeromgeving?.* [Online]
Available at: https://www.researchgate.net/profile/Jo-Tondeur/publication/340815867_Hoe_creeer_je_thuis_een_krachtige_leeromgeving/links/5e9f05c692851c2f52b712f2/Hoe-creeer-je-thuis-een-krachtige-leeromgeving.pdf
[Accessed 4 March 2021].

Dahm, L., 1996. Education at Home, With Help from School. *Educational Leaderschip,* 54(2), pp. 68-71.

Desprès, C., 1991. The meaning of home: Literature review and directions for future research and theoretical developent. *Journal of architectural and Planning Research,* 2(8), pp. 96-115.

Fusch, P. I. & Ness, L. R., 2015. Are we there yet? Data saturation in qualitative research. *The qualitative report,* 20(9), p. 1408.

Galletta, A., 2013. Introduction. In: A. Galletta, ed. *Mastering the Semi-Structured Interview and Beyond.* New York: New York University Press, pp. 1-9.

Gieryn, T. F., 2000. A Space for Place in Sociology. *Annual Review of Sociology,* Volume 26, pp. 463-496.

Graue, C., 2015. Qualitative data analysis. *International Journal of Sales, Retail & Marketing,* 4(9), pp. 5-14.

Hopkins, P., 2010. Home. In: P. Hopkins, ed. *Young People, Place and Identity.* London: Routledge, pp. 95-115.

Johnson, T. P., 2014. Snowball Sampling: Introduction. *Encyclopedia of Biostatistics.*

Kortekaas-Rijlaarsdam, A. F., Ehren, M. & Meeter, M., 2020. *Eindrapport onderzoek COVID-19 regeling inhaal- en ondersteuningsprogramma's 1e Fase.* [Online]
Available at: https://www.nro.nl/sites/nro/files/media-files/Eindrapport%20onderzoek%20COVID-19%20regeling%20inhaal-%20en%20ondersteuningsprogramma's%20–%201e%20Fase%20_vScholen.pdf
[Accessed 24 Februari 2021].

Ma, W., Adesope, O. O., Nesbit, J. C. & Liu, Q., 2014. Intelligent tutoring systems and learning outcomes: A meta-analysis.. *Journal of educational psychology,* 106(4), p. 901.

Mishra, L., Gupta, T. & Shree, A., 2020. *Online teaching-learning in higher education during lockdown period of COVID-19 pandemic.* [Online]
Available at: https://pdf.sciencedirectassets.com/776854/1-s2.0-S2666374020X00021/1-s2.0-S2666374020300121/main.pdf?X-Amz-Security-Token=IQoJb3JpZ2luX2VjEBoaCXVzLWVhc3QtMSJIMEYCIQDSBnsG1VPUt1nwIGeU%2FEBbGuUcBCuBeYNrpaUNRYlFBwIhAIx7iHwyZtXB%2F2RGtmaRRojjhIr1o7HPG8syArb0
[Accessed 24 February 2021].

Morton, R., 2012. Home education: Constructions of choice. *International Electronic Journal of Elementary Education,* 3(1), pp. 45-56.

Oliver, P., 2010. The privacy of respondents, and restrictions on the use of data. In: P. Oliver, ed. *The Students's Guide To Research Ethics.* Berkshire: Open University Press, pp. 77-81.

Onyema, E. M. et al., 2020. *Impact of Coronavirus Pandemic on Education.* [Online]
Available at:
https://genbase.iiep.unesco.org/workspace/applis/epidoc/fichiers/EPIDOC/38698_52821_56584_1_P
B.pdf
[Accessed 25 February 2021].

Rijksoverheid, 2020. *Coronavirus tijdlijn maart 2020.* [Online]
Available at: https://www.rijksoverheid.nl/onderwerpen/coronavirus-tijdlijn/maart-2020-maatregelen-
tegen-verspreiding-coronavirus
[Accessed 24 Februari 2021].

Sixsmith, J., 1986. The meaning of home: An exploratory study of environmental experience. *Journal of Environmental Psychology,* December, 6(4), pp. 281-298.

Sofear, S., 1999. Qualitative Methods: what are they and why use them?. *Health Services Research,* 5(34), pp. 1101-1118.

Steenbergen - Hu, S. & Cooper, H., 2013. A meta-analysis of the effectiveness of intelligent tutoring systems on K–12 students' mathematical learning.. *Journal of educational psychology,* 105(4), p. 970.

Streefkerk, R., 2019. *Inductive vs. deductive reasoning.* [Online]
Available at: https://www.scribbr.com/methodology/inductive-deductive-reasoning/
[Accessed 3 May 2021].

Tanner, B., Tilse, C. & de Jonge, D., 2018. Restoring and Sustaining Home: The Impact of Home Modifications on the Meaning of Home for Older People. *Journal of Housing For The Elderly,* 11 October, 3(22), pp. 195-215.

Thomas, P., 2010. *Chapter 4 Research Methodology and Design.* [Online]
Available at:
http://uir.unisa.ac.za/bitstream/handle/10500/4245/05Chap%204_Research%20methodology%20and
%20design.pdf
[Accessed 2021 June 10].

Tondeur, J. & Herman, L., 2019. 21st century skills: de kracht van fysieke leeromgevingen. In: *Inspiratiegids voor klasinrichting en scholenbouw.* Leuven: Acco, pp. 24-56.

Voas, J., 2020. *Rethinking Home, Office, and School.* [Online]
Available at: https://www-tandfonline-com.proxy-
ub.rug.nl/doi/pdf/10.1080/1475939X.2020.1854337?needAccess=true
[Accessed 24 February 2021].

Werner, C., Altman, I. & Oxley, D., 1985. Temporal Aspects of Homes. In: C. Werner, I. Altman & D. Oxley, eds. *Home Environments.* New York: Plenum Press, pp. 1-32.

Yang, X., Zhao, X., Tian, X. & Xing, B., 2020. Effects of environment and posture on the concentration and achievement of students in mobile learning. *Interactive Learning Environments,* pp. 1-14.

Yates, A., Starkey, L., Egerton, B. & Flueggen, F., 2020. High school students' experience of online learning during Covid-19: the influence of technology and pedagogy. *Technology, Pedagogy and Education,* 1 December.pp. 1- 15.

8 APPENDICES

8.1 APPENDIX 1 INTERVIEW GUIDE

The semi-structured interview is written in Dutch and will be conducted in Dutch, the language of the target group. This interview is translated from Dutch to English.

Interview with adolescents between 14 and 18 years old that engage in online lessons from home.

Gender:
Education level:
Age:
Place of residence:

1. **Consent**
   Do you want to participate in the interview?
   - Parents or participant has given consent.
   - Parents or participant has not given consent.

2. **Introduction**
   - The interview will last between 40 to 60 minutes and is conducted online.
   - The goal is to gain insights in your experiences and perceptions about the meaning of home during online education in the Corona pandemic.

3. **Background information**
   Would you like to share some information about yourself and your school?
   - To which school are you going?
   - What level of education are you doing?
   - How old are you?

4. **The Corona crisis at home (The transition)**
   Since February 2020, there has been a Corona outbreak in the Netherlands. Therefore, changing measures have taken place to prevent the spread of the virus.
   Could you tell me something about how you experienced these measures?
   - How did you experience the shift from lessons at school to lessons at home?
   - What has changed the most at home due to Corona?

   How do you experience lessons at home?

   - Is this experience positive or negative?
   - Would you like this in the future?

   Could you describe a typical online day of school?

   - How are the classes taught?
   - How to you contact other classmates?
   - Has this changes due to Corona?

5. **The physical home and learning space**

Since you are engaging in online education from home.
Where do you engage in online lessons at home?
- Is this your regular workspace?
- Could you tell me a bit more about this workspace?
- Why do you follow the lessons from this place specifically?
- Do you experience that place differently since following lessons from home?
- Where did you do homework before Corona?
- Would you like a different place in the house?
- Where in the house and why?

Can you always participate well in online classes?

- Is your internet connection good?
- Have you experienced problems with online classes?
- What could fix this?

What is the main difference between taking lessons at school and taking lessons at home when it comes to the place of learning?

- Could this be implemented differently at school/at home?
- How do you envision this?
- Does it feel different to take online lessons at home?

6. **The social home and external factors**

In your home also live other people or pets while attending classes.
Do you want to tell who is living together with you in your house?
- How many other people and/or animals live at home?
- Do you want to explain who these people are?

Do they influence your online lessons?

- Is the influence positive or negative?
- How do you experience this?
- Can you give an example?

How did you experience home before Corona?

- Is there a difference compared to now?
- How to you experience this?
- Can you give an example of this change?

7. **Ending the interview**

We have reached the end of this interview.
- Do you have any questions for the researcher?

Thank you for participating in the research!

Consent form

University of Groningen
Participation in Semi-Structured Interview
Title of the project: Experiences of Dutch Adolescents engaging in online education during the Corona Pandemic

Date:
Time:
Location Online:
Researcher Name:
Email:
Phone number:

Purpose of this research
This interview serves to gain a better understanding of the experiences of Dutch adolescents engaging in online education at home.

Procedures
You or your child has been invited to participate in a semi-structured in-depth interview to talk about his or her experiences. The interview will last a minimum of 40 minutes and a maximum of 60 minutes. Due to the Covid-19 restrictions the interview will be conducted online on a platform of your choice. The audio of the interview will be recorded.

Risks and benefits
The data collected during the interview serves to gain insights. The aim of this interview is to collect the adolescents' experiences and perceptions on online education at home. You will have the opportunity to review your interview transcript and confirm the information provided by you or your adolescent.

Extent of Anonymity and Confidentiality
By taking part in this research, you agree to give your or your child's expectations and perceptions in your or the child's name. Your or your child's name will be anonymized by using a pseudonym. The audio recordings will be kept until the completion and dissertation can be reviews by the interviewer and the supervisor of the University of Groningen. At no point in time will the researcher release any information to anyone else without your written consent.

Compensation
There is no compensation offered for participation in this research

Freedom to Withdraw
Please be aware that you or your child may withdraw at any moment.

Question or concerns
You or your child is welcome to ask questions at any time during and after this research. For questions feel free to contact the researcher through email: h.d.t.koning@student.rug.nl or call 06 13828545.

Participant Consent

I have read the consent form, have the nature of the study explained to me, I agree with the consent and agree to participate in the research.

Interviewer's Name: _____

Interviewer's Signature: _____

Participant's Name: _____

Participant's Signature: _____

Date: _____

8.3 APPENDIX 3 INDUCTIVE CODE TREE

This coding tree presents a summarized version of all the codes found during the analyzing process. The purple codes are deductive, and the blue codes are inductive codes discovered during the analyzing process.
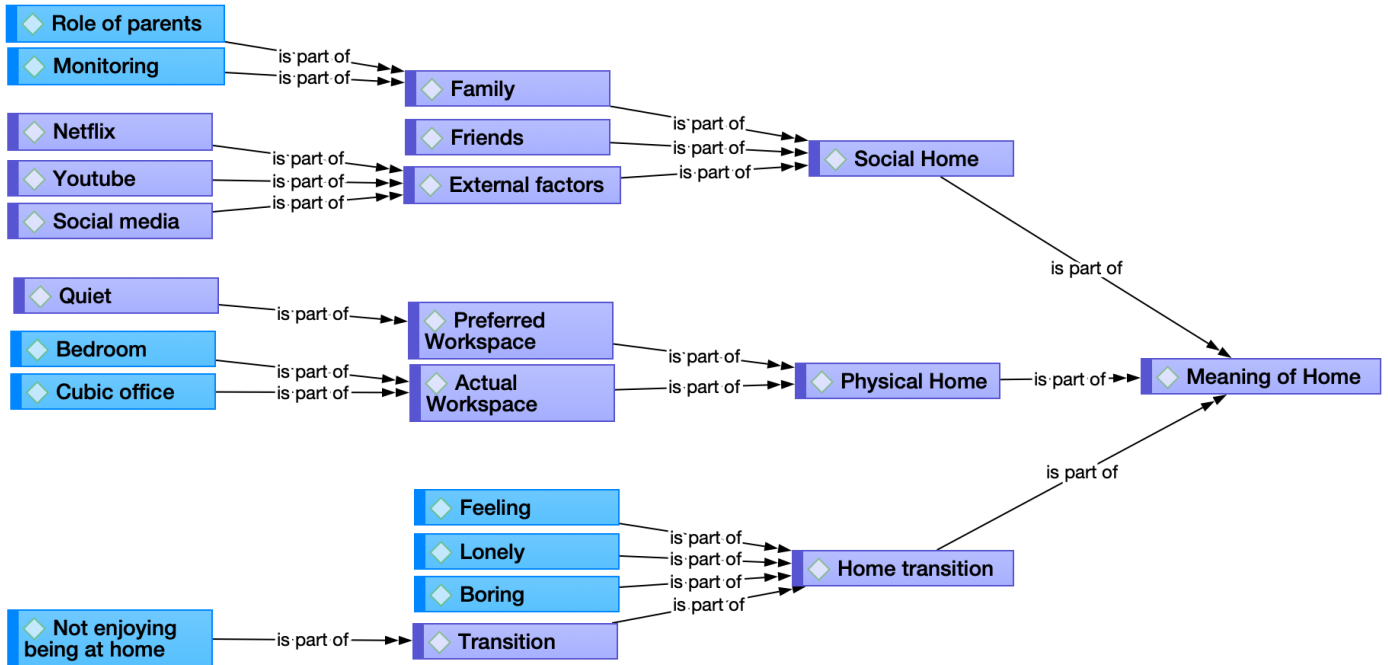

FIGURE 2 SUMMARIZED CODING TREE