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Swedish Pupils’ Perspectives on Emergency Remote Teaching during COVID-19 - A Qualitative Study

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A B S T R A C T

Due to the COVID-19 pandemic, schools in many countries were forced to stop face-to-face teaching and switch to emergency remote teaching (ERT). The aim of this study, based on semi-structured interviews with upper secondary-school pupils in Stockholm, was to explore how Swedish pupils perceive their ERT and to understand their preconditions for learning. We found variations among pupils with regard to how they perceived their new morning routine, the increased flexibility in structuring their day, the flexibility to choose their workplace at home, and the decreased control by their teachers. While some perceived the increased flexibility as challenging, others appraised it as a possibility to be more independent. With regard to their classmates, all participants perceived difficulties learning from each other in ERT. Identified difficulties involved comparing one’s performance to that of classmates, having deep discussions, encouraging each other, and organizing themselves in a group. The results are discussed in relation to previous studies, and are interpreted through the lenses of the Designs for Learning Theory.

I n t r o d u c t i o n

In mid-March 2020, as a response to the COVID-19 pandemic, the Public Health Agency of Sweden recommended that all upper secondary schools and universities stop face-to-face teaching in the classroom and move to teaching and learning from home (Folkhälsovården, 2020). Emergency remote teaching (ERT) is the term several researchers have used to describe the phenomenon in which teachers and pupils, with very little preparation and as a response to an acute situation, were forced to switch from classroom teaching to full-time teaching online (Bozkurt et al., 2020; Shim & Lee, 2020). Thus, several scholars have pointed out that ERT should not be compared with online learning but should rather be seen as a unique and distinct phenomenon (Hodges et al., 2020).

As such measures have not previously been implemented in Sweden, or in comparable countries, there is a great lack of empirical data to help us understand the specific ERT experience of children and adolescents (Fegert et al., 2020). Therefore, the current study sought to explore ERT from the perspectives of the pupils themselves, and to deepen our understanding of the challenges and possibilities posed by ERT from the pupils’ first-hand perspectives.

P r e v i o u s s t u d i e s

Several studies have explored how pupils experienced their remote education due to the pandemic, many of them reporting challenges related to the experience. Some studies have investigated parents’ perceptions of their children’s ability to manage ERT. Thorell and her colleagues (Thorell et al., 2020) found that parents in seven European countries perceived that their children felt more isolated and frustrated, had more learning difficulties, and were more distracted during remote education (Thorell et al., 2020). Similar results were found by Dong and colleagues (Dong et al., 2020), who reported that Chinese parents perceived that their children had difficulties working with tasks and were less motivated in ERT.

Other studies have collected data directly from the pupils themselves. A Norwegian study investigated the experience of lower secondary-school students of their ERT with regard to the effort they put into their studies, the feedback and support they received from their teachers, and their perceived ability to manage their work assignments (Mølan et al., 2021). By comparing the results of two surveys, one conducted during ERT and one conducted a year earlier, the researchers found that students experienced less support and received feedback from...
their teachers less frequently while studying remotely (Mælan et al., 2020).

Similar results were found in a study of German pupils, who reported that they spent less time on school-related work in ERT than in regular face-to-face class, despite experiencing more support from their parents (Letzel et al., 2020). In addition, they felt less supported by their teachers in times of remote education (Letzel et al., 2020).

On the other hand, several studies have reported some positive experiences related to ERT. A Norwegian study, based on an online survey, showed that the majority of pupils perceived that in ERT they had more creative tasks, received more useful feedback from teachers, had better progress in their learning, became better at using digital tools, did more schoolwork at home than they usually did at school, and experienced greater independence and influence over their learning (Bubb & Jones, 2020).

In a Chinese study, researchers showed that students with better abilities to motivate themselves, plan their studies, and deal with frustration and negative emotions experienced their distance education as rewarding (Zhang et al., 2020). Similarly, another study showed that students who could plan their study time and maintain daily routines were satisfied with their remote education (Ren et al., 2020).

In a study based on interviews with pupils in Mexico and Germany, the researchers aimed to explore experiences of ERT in terms of both difficulties and opportunities (Pozas et al., 2021). Experienced changes and opportunities involved the use of digital media and tools, the flexibility in organizing their daily routines, and the possibility to strengthen family interaction and social relationships as well as to prioritize issues of care, empathy, and emotional support (Pozas et al., 2021). Difficulties and constraints that were experienced included difficulties in organizing and establishing routines, and the loss of social contact (Pozas et al., 2021).

The variation in the results of the studies described above indicates that the experience of ERT due to a pandemic is a complex and contextual phenomenon. The intention of the current study was to contribute empirical knowledge based on pupils’ first-hand perspectives, and explore how they themselves perceive various aspects related to their remote education. More specifically, we intended to answer the research question of what challenges and possibilities upper secondary-school pupils in Stockholm experience with regard to their ERT due to the pandemic. Such knowledge is useful not only in the case of future emergency events but also beyond the pandemic, for practice and theory development.

The context of the study

In order to understand the study’s context, two aspects should be noted. The first is that no official lockdown was applied in Sweden, and that measures to prevent the spread of the virus, such as maintaining social distance and limiting social contacts to one’s closest family, were only recommendations (Folkhälsoomndigheten, 2020). Following the Swedish Public Health Agency’s recommendations was based on personal responsibility rather than being required by law (Folkhälsoomndigheten, 2020).

The second aspect which is relevant to mention is the relatively high use of information and communication technology in Swedish elementary education (OECD, 2015). Furthermore, the vast majority of pupils’ homes have Internet access and own a computer (OECD, 2015). In addition, Swedish upper secondary-school pupils report an extensive out-of-school use of smartphones and have generally positive views on the in-school use of laptops and digital learning assistant programmes (Lindberg et al., 2017).

Method

Study design

To capture the complexity of the youths’ perspectives, this study applied qualitative research methods based on semi-structured individual interviews. Qualitative methods allow for an open-ended exploration, and enable us to understand contextual aspects related to the phenomenon under study (Sandelowski, 1995). The methodological approach of inductive thematic analysis, suggested by Braun and Clarke (2006, 2019), was used as a guide for the data analysis. Choosing an inductive approach to data collection and analysis, in which themes are drawn from the data rather than from a predefined conceptualization, was in line with our aim to explore the pupils’ own perspectives on their ERT.

Recruitment procedure and study participants

The inclusion criteria for the study were upper secondary-school pupils aged 16 to 19 years, whose schools had switched from teaching in the classroom to teaching via digital platforms due to the pandemic.

Participants were recruited both via teachers working in public and private schools in the city of Stockholm – who informed their pupils about the study and how to contact the authors – and through snowball sampling. The study group of 13 participants consisted of eight girls and five boys, aged 16-19. The participants varied in terms of the subject of their educational programme (natural science, economics, social science, art, music), type of school management (private or public), and type of family (live with two parents, live with one parent, have siblings, only child). Table 1 describes the participants’ characteristics.

In this study we chose participants who attended theoretical study programmes but not professional programmes, which are more practice-oriented and in which students might experience different problems with a shift to online teaching.

Data collection

The purpose of the semi-structured individual interviews was to achieve descriptions of the pupils’ thoughts, beliefs, emotions, and behaviours relating to their school assignments during ERT in the context of everyday life. The interview guide was treated as a flexible tool, and was revised according to the interview content. Table 2 outlines a sample of interview questions.

Data collection started on April 30, 2020, about a month after the start of ERT, and ended on May 28, 2020, three weeks before summer vacation. The data collection ended when saturation had been reached in terms of the emergence of categories and concepts. Interviews, conducted by the authors via the digital platform Zoom, lasted 25-50 minutes and were audio-recorded and transcribed verbatim.

Data analysis

The purpose of the data analysis was to inductively develop codes and themes from the data, and to suggest a conceptualization of upper secondary-school pupils’ experiences and perceptions regarding working with school assignments in ERT.

In line with Braun and Clarke (2006), the data analysis involved six stages. In the first stage, we familiarized ourselves with the data by listening to the interviews and reading and re-reading the interview-transcriptions, while noting our thoughts and impressions. In the second stage we generated initial codes by breaking up the data into their component parts and properties, and defining the meanings on which they rested. In the third stage the most significant and frequent codes were selected, organized, and synthesized in order to propose themes. In the fourth stage, we reviewed themes by checking whether they reflected and represented both the initial codes and the entire data.

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set. In the fifth stage we defined and named the themes, which will be presented in the Results section. Finally, in the sixth stage we adopted the recent approach to thematic analysis (Braun & Clarke, 2019) and applied what Braun and Clarke call ‘a scholarly analysis’ (Braun & Clarke, 2019, p. 594), in which the results were interpreted through the lenses of the Designs for Learning Theory suggested by Selander (2008). This last stage of analysis allowed us to understand the inductively drawn results from a theoretical perspective.

The data analysis was performed using the qualitative data analysis software NVivo 12 (QSR International, 2018). In order to increase the trustworthiness of the data analysis, first, each author performed the initial coding individually, enabling us to compare and discuss each other’s coding later. We also had frequent discussions regarding our organization and synthesis of the data into integrative conceptualizations.

**Ethical considerations**

As no sensitive personal data were obtained during the interviews, as dictated by Swedish law, no approval was needed from the Ethical Approval Authority (Lag om etikprövning av forskning som avser människor, 2003). However, ethical issues were carefully considered and addressed. Prior to the interviews, the participants received information about the study’s aim and method, as well the conditions of confidentiality and anonymity. In addition, the participants signed an informed consent form. When participants were under the age of 18, their parents received the information about the study and gave consent for their child’s participation. The empirical data were protected according to the General Data Protection Requirements (Kompletterande bestämmelser till EU:s dataskyddsförordning, 2018).

**Results**

The aim of the study was to explore how Swedish upper secondary-school pupils perceived their ERT and to understand their preconditions...
for learning during the pandemic. In the result section the research questions how upper secondary-school pupils have perceived their ERT in Sweden during the pandemic will be answered.

The analysis identified three themes which gathered the pupils’ perceptions concerning their remote studying due to the pandemic. Each theme represents a different contextual aspect of the experience. The first, ‘New routines and daily structure,’ reflects participants’ perceptions related to the role of the new routines involving flexibility in getting ready in the morning, the flexible structure of the day, and their workplace at home. The second theme, ‘My teachers,’ reflects participants’ perceptions related to their teachers’ role in their remote studying. The third theme, ‘My classmates,’ represents participants’ perceptions related to their classmates’ role in their remote studying. Table 3 summarizes the identified themes and sub-themes. Citations from interviews are used for illustrating the content of sub-themes.

**New routines and daily structure**

This theme represents participants’ perceptions related to the role played by the new routines and the structure they provide throughout the day in their ERT. Three sub-themes were identified related to how the participants prepared themselves in the morning for a new school day, the increased flexibility in forming the daily structure, and their workplace at home during their studies.

**Flexibility in getting ready in the mornings**

Not needing to commute to school or meet classmates and teachers made it possible to sleep longer and start the day later than usual, and meant not needing to change clothes or fix one’s appearance. Perceptions regarding these new routines varied among participants. While several of them perceived it as a possibility to save time and to avoid the burden of getting ready in the morning, many others perceived that it had a negative effect on their motivation. Some pupils explained that by getting ready for school in normal times they went into a mode of putting in an effort. According to these pupils, not needing to prepare themselves and put in the extra effort in the morning led to decreased motivation. Such a perception is illustrated in the following:

I got lazy, or how should I say it, it feels like you got used to not having to really make an effort in the same way. Before it was a lot like, for example, I needed to be on time for the bus; only that in itself is like an effort, so I have to actually make an effort to actually get to the bus at the right time and find the right train and all that. But now if all that’s gone, then it’ll be like, I don’t feel like I need to make as much of an effort, simply, and then you get lazy, because you have nothing to give. (Maria)

**Flexible daily structure**

According to the participants, studying from home, in the same way as studying in the classroom, had a structure and certain frameworks that were provided to them. Activities, such as whole-class reviews and group and individual assignments, were mixed according to a given schedule. However, the fact that pupils were often able to turn off their camera while working on their individual assignments led to participants’ perceptions that there was a flexibility to work on other assignments or do other activities.

Also here, there was variation in how participants perceived the flexibility to work on assignments at other times than the teachers had planned on the schedule. Some participants perceived it as increased independence and a possibility to adjust their work to their own needs. In these cases, they prioritized working on other assignments than those the teachers had planned on the schedule, as they perceived that the teachers were unable to see what they were working on at home. Thus, the pupils took the opportunity to focus on subjects they needed to put more effort into.

However, other participants perceived that the flexibility to choose when to work, and on which assignments, was overwhelming and difficult to manage. One challenge involved being able to stop oneself from working during breaks and missing taking pauses from the school work, as described in the following quote:

‘I used to say ‘okay, the lesson’s over, now I have a break, now I have a lunch break, now I’ll go have lunch in the dining hall’. Now it’s like this: ‘Okay, my next lesson is in 30 minutes. I can use ten minutes to finish this task I was doing’. Just to finish it up…then you feel a little bit happy with yourself…but also tired afterwards. (Axel)

Another challenge was the risk of procrastination and the difficulty stopping oneself doing activities that were not related to the school assignments. In this case, participants perceived that they had no control over what activities constituted their workday, as their activities were usually not planned. One of the participants described this as follows:

I’ve noticed that I find it quite difficult to work. So then I usually do other things. [...] Maybe go and have some ice cream or something. [...] So then I usually work in the evenings later instead. When the lesson’s over. Sometimes [I do this], and sometimes I don’t. (Matilda)

**Flexibility in forming one’s workplace at home**

While at school the pupil’s workplace in the classroom is more self-evident, at home pupils may have the flexibility to choose their own workplace. How they did this varied among the participants. Some described choosing different workplaces for different tasks depending on their characteristics, all from sitting in bed to more traditional positions at the desk. Others explained that they had chosen their workplace based on practical aspects, such as having access to the Internet or it being where other family members worked.

However, some commonality was found between participants, as their perceptions of their workplace at home involved its relation to being distracted by other activities such as eating, watching TV, or being active on social media during school time. While a sofa and a bed were perceived as places where one might be more distracted, sitting at a table was perceived as ‘safer’.

Pupils who negatively perceived the unclear boundaries between studying and other activities attempted to manage this by limiting their workplace to a specific part of their home, as described by one of the pupils:

I’m always in the same place; I’ve made this my place to study. I think it’s hard to be in my room, because I think it’s nice to separate the place where I study and the place where I take it easy and so on. (Isabelle)

| Theme                        | Sub-theme                                                                 |
|------------------------------|---------------------------------------------------------------------------|
| New routines and daily       | Flexibility in getting ready in the mornings                              |
| structure                    | Flexible daily structure                                                  |
| My teachers                  | Flexibility in forming one’s workplace at home                            |
|                              | Increased need for teachers’ clarity of instruction                        |
|                              | Teachers adjust themselves less to pupils’ responses                       |
|                              | Teachers have less influence on one’s efforts                              |
|                              | Receiving teachers’ help                                                   |
|                              | Difficult to influence teachers’ decisions                                 |
| My classmates                | Difficult to compare oneself to others                                    |
|                              | Difficult to know how others perceive one’s performance                   |
|                              | Difficult to discuss with each other                                       |
|                              | Difficult to work together on group assignments                            |
|                              | Difficult to encourage each other                                          |
In this first theme, descriptions of the flexibility in time and space that pupils experienced in connection to ERT were highlighted. A wide variation emerged, highlighting that there is no single dominant collective experience of ERT. Rather, it became obvious that pupils experienced different challenges and possibilities posed by the new routines with regard to the flexibility of daily structures, including morning routines and choosing their individual workplace.

**My teachers**

This theme consists of participants’ perceptions of various aspects related to their teachers’ behaviours and teaching strategies, and the consequences of these aspects on their learning in their remote studying. The theme is comprised of five sub-themes related to teachers’ clarity of instruction, teachers’ adjustment to pupils’ responses, teachers’ control, receiving teachers’ help, and the experience of being able to influence teachers’ decisions.

**Increased need for teachers’ clarity of instruction**

All participants perceived that their need to receive precise and clear instructions from their teacher increased as a result of the ERT. Many of the participants experienced new difficulties understanding their teacher’s expectations, leading to confusion and uncertainty, as well as feelings of anger and disappointment when they realized that misunderstanding their teachers’ expectations had caused them to put in more effort than necessary when doing an assignment. When teachers’ expectations were comprehensive and precise, participants perceived that they could manage the assignment easily:

The teacher’s very good at writing, like, what the outline in the report should look like: ‘I expect two or three references, you should have a critical part’; so, very clear about exactly how the tasks and reports should be carried out, so it’s not usually that problematic. (William)

**Teachers adjust themselves less to pupils’ responses**

Many of the participants perceived that teachers’ adjustment to the pupils’ reactions was less effective in ERT. They perceived that not being with their teachers in the same room, and the limited view of the camera, made it difficult for the teachers to see and understand, for instance, whether they felt that the task was interesting or boring or if they needed more time to complete it. As teachers could not adjust their teaching effectively, several participants perceived that learning was more demanding. One of the participants exemplifies this:

When you can interact with each other in different ways in real life, when we sit in a classroom, the teachers can look at us, how we... at our body language, and realize ‘Yeah, that might be too much, they might need a break.’ Now you don’t have this between each other, because they’re just screens – which makes it a lot harder. (Robert)

Pupils’ descriptions illustrate how intuitive interaction between teachers and students, which is important in classroom learning, becomes more difficult in ERT.

**Teachers have less influence on one’s efforts**

All participants perceived that a consequence of ERT was that teachers had less influence on their behaviours, as well as less knowledge about how much effort they put into their studies and performance. Teachers had also less control if pupils were not prepared for a class or when pupils did other things besides studying during class. One such perception is illustrated in the following citation:

Now a teacher can’t see you or hear you, so you can sort of do what you want. (Amanda)

The same pupil also provides examples of what goes unobserved by teachers during ERT:

At school you have... you can’t just pick up the phone during a lesson, as easily as you can at home. Because a teacher would kind of say something to you. (Amanda)

**Receiving teachers’ help**

With regard to perceptions of the help they received from their teachers, for example when they did not understand the subject being taught or had a question about an assignment, there was variation between participants. Some perceived that it was easier in ERT to articulate their questions and be explicit about what their problem was. Several participants also said that it was more effective to receive teachers’ support in writing, as they could go back to it as needed.

On the other hand, many of the participants perceived that it was difficult both to ask for help and to receive help when studying remotely. One difficulty was related to the teacher’s availability: many pupils perceived that teachers were more difficult to approach. Also, some perceived the procedure of formulating and writing down one’s question or problem, as well as sending an email, as complicated and demanding. This is described by one of the participants below:

Yes, well, during the lesson I can go see the teacher at any time and ask, um, and also if I see the teacher in the corridor. Here it gets more complicated to, like um, contact the teacher, and you have to email; you have to, it’s not that difficult but it doesn’t feel like I get it right, [like I get] as developed an answer as I would get face-to-face. (Nora)

However, participants perceived that when teachers had individual conversations with them, for example on the phone, they received the support and encouragement they needed.

**Difficult to influence teachers’ decisions**

Some of the participants perceived that it was difficult to organize themselves as a group in order to influence teachers’ decisions, as one of the participants illustrated:

Our teachers usually ask us when it’s appropriate for us to have tests, but now it may have become more that... it’s more difficult to influence it now, when you’re at home. So you can email the teacher, but it’s like being one voice; that is, one person, instead of when an entire class has a vote. (Mika)

In other words, ERT influenced not only the individual communication between teacher and student but also the interaction between the teacher and the pupils as a group. In the interviews, pupils described a variety of challenges when communicating with teachers during lessons. ERT influenced the interaction on which learning is based; limitations were described in relation not only to instructions and learning tasks but also to daily classroom democracy.

**My classmates**

This theme represents participants’ perceptions related to the role their classmates play in their remote studying. Learning with and from classmates was generally perceived as a challenge during remote education. While in the classroom peers were perceived as a source of feedback and social support, for most participants studying online meant that this feedback and social support became poorer. The analysis revealed five challenges related to learning with and from classmates in remote studying, with every challenge representing a sub-theme.

**Difficult to compare oneself to others**

Comparing one’s performance to that of classmates in a regular classroom setting was something that many participants did in order to adjust their efforts and work. When studying remotely, several participants perceived this comparison as difficult, leading to uncertainty in
relation to the demands of the assignments, as illustrated in the following quote:

When I’m at school I talk to my friends, and then we often discuss, ‘Yes but how much have you written on this essay’, and ‘What have you written about’; uh, and then it’ll be a little easier to get started but also you feel as if you’ve caught up with the others. Uh, but that’s not happening right now. (Isabelle)

In addition, while studying in the classroom pupils sit together in the same room when working on their personal assignments. This allows them to comment when they realize that their classmates are doing their assignment incorrectly. Classmates’ comments allow the pupils to be able to change their work. Several participants perceived that when studying online and thus sitting in different locations, classmates were unable to see each other’s work and to comment on any mistakes.

**Difficult to know how others perceive one’s performance**

When having assignments involving presenting one’s work to others, some participants perceived that, in their remote studying, it was more difficult than in the classroom to receive feedback and know how others perceived their performance. In the classroom, peers tended to give spontaneous feedback and indicate their opinions on one’s performance verbally or through body language. When presenting to others online, however, several participants perceived that such formative feedback was rare or ambiguous.

**Difficult to discuss with each other**

Many of the participants perceived that it was more difficult to have more developed discussions, in which they could exchange ideas and deepen their knowledge. One reason for this was that, in ERT, both the time allotted for conducting the assignments and the assignments themselves were perceived as stricter. These perceptions are captured nicely in the following quote:

When it comes to distance learning, only the questions you got are discussed, nothing more; because then it’ll be like we’re on the wrong track… if you’re in the classroom, it’s the questions you got as a starting point for a deeper discussion… the time limit when it comes to distance education is much stricter, I would say, or perceived as stricter, than in the regular classroom and I think that, I think that’s quite a shame. (Simon)

**Difficult to work together on group assignments**

In addition, work in groups was perceived as more individual and less cooperative in remote studying compared to group assignments in the classroom. Pupils described that they divided the group work task into parts which were then solved individually rather than together in the group, as the quote below illustrates:

I think the difference is when you work in a group at school. Then it’s more like ‘Okay, we’ll do this together’. Everybody shares, like, together. But when you’re at home, it’s like this: ‘Okay, we’re splitting this group task, so you’re doing this part, I’m doing this part, you’re doing this part, and the other [pupil] is doing this part.’ And it becomes individual in the task itself; while if you were to do it at school, it would be included as a group assignment… Because it’s easier to just say ‘Yes, but I want to do this’. (Axel)

This quote does a good job of describing a common challenge of group work: To truly work together and not divide the task into parts. According to the student, this challenge becomes very evident when group work is to be conducted online. Another difficulty involved the perception that, in remote studying, participants could easily shirk their responsibility and that the burden of doing the assignment was not divided equally among all the group members.

**Difficult to encourage each other**

Participants perceived that, in remote studying, classmates were less encouraging and that encouraging others was more difficult. The perceived reason for this was the lack of spontaneous meetings and everyday conversations the pupils experienced when sitting in different places and meeting each other online.

However, several pupils managed the need to be encouraged via other channels than at school, such as maintaining close contact with close friends and through family members.

This third theme illustrates the importance of collective learning processes and the role fellow pupils play in the learning experience of upper secondary-school pupils. Pupils are important for each other, not only in discussions and group work but also in monitoring individually assigned tasks, encouraging each other and calibrating the efforts needed for learning.

**Discussion**

This study aimed to explore ERT from the first-hand perspective of upper secondary-school pupils. Although pupils’ situation during their emergency remote learning has been investigated in earlier studies, relatively few illuminate this experience from the perspective of the pupils themselves. The applied qualitative methods allowed us to explore variations and deepen our understanding of contextual aspects related to this experience. In the following section we will discuss the results in relation to previous studies, as well as in relation to the Designs for Learning Theory (Selander, 2008), which we found relevant to use in order to understand the results on a theoretical level.

According to the Designs for Learning Theory, in order to understand the experience of learning we need to understand the environment in which the learning process takes place, as well as the preconditions for learning (Selander, 2008). The theory’s point of departure is that learning is a social activity embedded with different social norms and available learning resources (Selander, 2008). It suggests that, as learning occurs via social interactions, the media or channel through which the individuals interact with each other has an effect on each individual’s meaning construction of the learned material (Selander, 2008). The concept ‘designs for learning’ highlights the material and temporal conditions for learning, and refers to the dispositions of the learning process, such as time, space, material resources, norms, and the structures of social interaction in a specific environment (Selander, 2008). The results highlight pupils’ own perspectives on what it meant for them to rapidly change from a regular classroom education to ERT, being forced to adjust to a new learning design with new learning resources, new norms, and new modes of social interaction, and the effect this had on their learning processes.

With regard to changes in learning resources, the most prominent change involved time and space. Daily routines changed, and the pupils had to build a physical learning milieu at home. In line with the results of previous studies (Dong et al., 2020; Bubb & Jones, 2020), our study also highlights the more flexible structure of ERT in comparison to face-to-face teaching in the classroom, from getting ready in the morning, to having a more flexible structure during the day, to adapting to the physical possibilities of where to sit at home, to managing distractions from activities at home that were associated with leisure time.

Regarding changes in norms, the most prominent one involved turning off one’s camera and being invisible to others during lessons. This new norm was perceived differently among the pupils: While some saw it as a possibility to not have to put too much effort into their visual appearance, allowing them to be more comfortable with how they looked, others perceived it as an obstacle to relating to their classmates and teacher.

With regard to social interaction, the pupils perceived that the accessibility of teacher support was different in ERT compared to classroom learning. While other studies (Dong et al., 2020; Marlan et al., 2021) have reported that the availability of teacher support decreased...
due to ERT, our study highlights variation among the pupils. Some perceived that support from teachers was more available during ERT, with teachers answering their questions and explaining the taught material via written emails, which the pupils could reread whenever necessary. Other pupils, however, perceived that teacher support was more available in the regular classroom education, with meetings occurring face-to-face, since questions could be asked more spontaneously either during or directly before or after lessons. However, all pupils perceived that the need for clear and understandable instructions from teachers increased with ERT.

The new learning design of ERT also led to changes in social interactions between pupils and teachers as well as other pupils. With regard to social interactions with classmates, all participants perceived discussion, reflection, and learning together as more challenging in ERT. This has also been touched on in earlier studies (Pozas et al., 2021), in which difficulties were described in relation not only to organizing but also in social contact. More specifically, pupils in our study perceived that in ERT it was more difficult to receive feedback, to encourage and be encouraged by others, to compare one’s own performance to that of others, or to understand how others perceived their performance.

Similar to other studies (e.g. Letzel et al., 2020), this study also showed that all pupils perceived that teachers had less control over their performance. In our study, however, there was variation in the meaning this decreased control had for the pupils. For some, the teachers’ decreased control meant having the possibility to make their own decisions and be more independent. For others, the decreased control meant that teachers could not help them monitor their studies.

The results of this study indicate that ERT as a new learning design – with changes in the available resources and the physical preconditions, as well as the norms and modes of social interaction – may have a prominent effect on learning. However, our study suggests that the effect of the learning environment is mediated by the individual’s subjective perceptions of it. As the results highlight, there is variation in how pupils perceive similar conditions of their ERT. Whereas some perceived, for example, the flexibility in forming their morning routines and workplace at home as positive and as offering a possibility to be independent and increase their control, others perceived it as a burden, as an obstacle to be surmounted.

Limitations

The qualitative methods used in this study allowed for a nuanced exploration of pupils’ perceptions of their ERT. However, some methodological limitations should be considered when interpreting the results. Firstly, the group of participants is small and relatively homogeneous with regard to the level of their educational programmes, as all participants were taking part in studies at a level that would provide eligibility for academic studies. It is possible that pupils in more practically or professionally oriented programmes may perceive their ERT differently. The study was conducted in an urban area, and we cannot judge whether pupils in rural areas might have had similar experiences or might have described slightly different variations of their ERT.

Another limitation of the study is that no attention was given to socioeconomic aspects related to the family, aspects that may have importance for the experience of remote studying. For example, Vekiri (2010) found that pupils from low socioeconomic backgrounds tend to dominate their skills in using digital devices for learning, and feel less confident doing so. How the home environment influences working conditions for pupils during ERT needs more attention in future studies.

A further limitation in the analysis of interviews was that the pupils’ academic achievement was not considered. Pupils’ achievement may be a relevant aspect, as previous studies have shown that low-achieving pupils perceived the feedback they received from teachers during ERT to be more helpful and effective than middle- and high-achieving pupils did (Målan et al., 2021). Furthermore, pupils with high academic achievement experienced the greatest decrease in motivation and school enjoyment with the change to ERT (Målan et al., 2021). Thus, understanding how ERT is perceived by pupils with different levels of academic achievement is another suggestion for future studies.

In addition, it is also important to note that the data collection took place at the very beginning of ERT in Sweden, when pupils had been studying from home for only a few weeks. This aspect may have some implications on the results’ generalizability to later periods of ERT, when pupils had become more experienced and the teaching was more developed.

Contributions to theory and practice

Besides the contribution the study makes to our understanding of the unique and distinct experience of ERT due to a pandemic by highlighting the first-hand experiences of youths who took part in this experience, it also makes practical and theoretical contributions beyond the pandemic. It contributes to theory by illuminating the role of the individual’s meaning-making and subjective perceptions of their learning environment, suggesting that it may not be the actual characteristics of the learning environment itself that have an effect on the learning experience but rather how the individual perceives these characteristics. The variation that was found in the study regarding how the participants perceived similar conditions in their learning environments implies that, when designing learning environments, educators should avoid a one-size-fits-all approach and instead adopt a more personalized approach that takes into account individual differences in terms of subjective perceptions and meaning-making.

Conclusions

There are several conclusions to be drawn from this study. Firstly, it increases the awareness that there is variation among pupils in how they perceive their remote studying, and that some pupils perceive the flexible structure and the new daily routines of ERT as overwhelming and difficult to manage. Secondly, the study highlights pupils’ perceived need for support and encouragement during ERT. Thirdly, it illuminates the difficulties pupils have in learning with and from their classmates, difficulties that teachers should consider when planning ERT. Finally, the study highlights relevant aspects related to designing learning environments and preconditions that have an effect on pupils’ learning environments, from the perspective of the pupils themselves.

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