FINNISH PRIMARY TEACHER'S EXPERIENCES OF REMOTE TEACHING DURING COVID-19 SCHOOL CLOSURES

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The whole world was in an unexpected situation early 2020 due to the coronavirus disease (COVID-19) pandemic. As an attempt to stop the spread of the virus, schools were closed globally leaving approximately 1.6 billion children and youth affected. Teachers had to adapt to the new and uncertain situation quickly and organize their work remotely while taking care of their personal life. The purpose of this study is to investigate the experiences of teachers in their work in one city in Finland during the eight-week school closure due to the pandemic. If a similar situation happens in the future, it is important to learn what worked well and what could be done better. It is also worthwhile to find those practices that were used during the school closure that could be used in the development of normal schoolwork in the future.

The study was conducted as a qualitative study where eight class teachers were interviewed. The main research question was: "What were the primary school teachers' experiences of teaching during the emergency remote school (ERS) period due to the COVID-19 crisis in one Finnish city in spring 2020?" To support the main question, the following sub questions were formed: (i) How did the teachers organize teaching in practice at different grade levels in primary school during the emergency remote school period? (ii) What challenges did teachers perceive for pupils and for teachers during the emergency remote school period? (iii) What positive aspects did teachers perceive of the emergency remote school?

The findings of this study showed that there were differences in the practicalities that individual teachers used in their teaching during the school closure. More consistency within schools and nationwide along with sharing of ideas would be beneficial to ensure the same quality of teaching to everyone. All of the participants experienced a greater workload during the remote schooling period, while for some the experience was more burdening than for the others. The greatest benefit that was seen in the situation was the development of technology skills of pupils and teachers when digital tools were utilized now more than ever before in school. Other benefits that the teachers perceived were the development of individual working skills of pupils and some pupils were seen as benefitting from the opportunity to study at their own pace and without the social pressures of school environment. Challenges perceived included the lack of teacher and peer support for pupils, along with the lack of spontaneity of face-to-face interaction.

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1 Introduction

At the time of writing this thesis, the coronavirus disease (COVID-19), has affected the lives of people all over the world. According to the present knowledge, the virus started in Wuhan City, China, in late December 2019 (WHO, 2020). The COVID-19 was declared a global pandemic by the World Health Organization (WHO) on the 11th of March 2020 (WHO, 2020). The WHO urged all governments to take immediate action to prevent infections in order to save lives and minimize the impact of the disease by isolating people as one of the means in combatting the pandemic (WHO, 2020). As a response to this situation, schools in more than 190 countries around the world closed in the middle of March 2020 leaving more than 90 % of the world's student population, equivalent to 1.57 billion children and youth affected (UNESCO, 2020). In Finland, where this study was conducted, the government closed all schools countrywide on the 18th of March 2020 (Valtioneuvosto, 2020a) and re-opened on the 14th of May (Valtioneuvosto, 2020b). The schools were closed for eight weeks and teaching was carried out remotely.

The urgent decision to close schools was made by the Ministry of Education and Culture (MEC) to react to the serious examples already seen in China and Europe, and since the available knowledge of the nature of the virus was unreliable (Niemi & Kousa, 2020). As education was moved in a very fast schedule to online platforms, television and radio, there begun a worldwide experiment, that has never been done before (UNESCO, 2020). Hodges, Moore, Lockee, Trust, and Bond (2020) point out that because the move to teach online was hurried under these circumstances, nobody really took full advantage of the possibilities of existing online formats for distance learning. While online distance education is a complex and carefully planned process that involves more than simply uploading educational content, the solution for education during the COVID-19 crisis has been more of a temporary solution (Bozkurt & Sharma, 2020). The term; *emergency remote teaching* has been proposed to be used to specify the type of instruction that is used under the pressing circumstances of a crisis (Bozkurt & Sharma, 2020; Hodges et al. 2020). In Finland, the term; "etäkoulu" - *(direct translation: "remote school")* has been used commonly in all the discussion about school during the COVID-19 school closure in spring 2020. In this study, the term *emergency remote school* (ERS), will be

used to address education during school closure due to COVID-19 in Finland in spring 2020.

Finland's educational system is decentralized, meaning that the local authorities have the responsibility for educational quality (Niemi & Kousa, 2020). Teachers have a pedagogical autonomy and they can decide their methods of teaching and materials used (MEC, 2017). The Finnish National Agency for Education published a guideline with eleven points on how to organize remote education on the 17th of March, the day before schools were closed (OAJ, 2020a). The guidelines were not very specific and at the end remote school was organized by teachers using a wide variety of platforms and methods, depending on the policies and equipment provided by individual municipalities, and skills and knowledge of individual teachers. Jaakko Salo (2020a) from the Trade Union of Education in Finland (OAJ) told Helsingin Sanomat, a major newspaper in Finland, that there were big differences among the municipalities in how prepared they were with the equipment to produce online teaching remotely. According to Salo, this was a huge challenge to teaching personnel and he also pointed out that the same results in learning were obviously not to be expected as normally would be in schools (Salo, 2020a). It was estimated that gaps in learning would manifest for multiple reasons, such as the varying abilities of children for independent work (Andersson & Salo, 2020) or family backgrounds, which set the pupils in very unequal positions (Andersson & Salo, 2020; Jægera & Blaabæk, 2020; Pensiero, Kelly, & Bokhove, 2020; Salmela-Aro, 2020). Also, the area of living, and the resources provided by the municipality and its schools for digital learning were considerable factors causing inequality in Finland (Salo, 2020b).

As schools didn't have time to prepare for teaching remotely (Huat See, Wardle, & Collie, 2020), teachers were quite alone with their work in this hurried schedule having to solve many problems. Along with the question of how to reach all their pupils and facilitate learning equally, was how to balance their workload with their own personal life and wellbeing. The message heard from teachers was that the fast adaptation to emergency remote school and the uncertain situation caused stress, especially in the beginning (Kim & Asbury, 2020) and when the situation was extended (Salo, 2020b). Teaching remotely increased teachers' workload remarkably and the number of working hours increased dramatically (Salo 2020b). Other factors causing stress for teachers were worrying about the health of themselves and loved ones and being faced with a new type of a situation

for which they were totally unprepared (Salo, 2020b). More challenge was created for the teachers, as they might have had the responsibility of taking care of the schooling of their own children (Huat See et al., 2020) as well as taking care of vulnerable family members while managing their own mental health (Kim & Asbury, 2020).

To this date, the data to study the effects of suspension of face-to-face learning has been limited (Engzell, Freyd, & Verhagena, 2020). This study will introduce some relevant studies that are currently available, as more research is being done all the time. The idea for this study emerged from the researcher's own experience of working as a class teacher during the period of emergency remote school. The experience was interesting and provided insight into the situation. This study examined the experiences of eight primary school teachers with varying work experiences in one city on the west coast of Finland. The aim was to find out how they managed their work during the emergency remote school. With this experience, we can learn from the possible mistakes made this time and not let the history repeat itself in the future (Bozkurt & Sharma, 2020). Schools should be prepared for exceptional teaching arrangements, as times of crisis similar to COVID-19 might happen again (Niemi & Kousa, 2020), and the remote schooling experience might help us to create new and more effective ways to educate our children (Kaden, 2020).

The main research question of this study was "What were the primary school teachers' experiences of teaching during the emergency remote school (ERS) period due to the COVID-19 crisis in one Finnish city in spring 2020?" To support the main question, following sub-questions were formed:
- How did the teachers organize teaching in practice at different grade levels in primary school during the emergency remote school period?
- What challenges did teachers perceive for pupils and for teachers during the emergency remote school period?
- What positive aspects did teachers perceive of the emergency remote school?

2 Emergency remote school during COVID-19 crisis

In this section, the effects and experiences of emergency remote school due to COVID-19 pandemic are being discussed through currently available research that has been conducted in different countries. Some research that has been conducted in Finland is included here, while Chapter 3 will concentrate more specifically on the ERS in Finland.

2.1 Learning during the ERS

Engzell, Freyd, and Verhagena (2020) have been among the first ones to conduct a study evaluating the effects on learning that the school closures due to the pandemic had in Netherlands. They were able to reach a rich data (n ≈ 350 000) of primary school pupils as the Netherlands conducts national assessments twice a year where testing took place just before and after school closures in 2020, which also made it possible to compare the data for learning loss to the previous years. The main interest for Engzell and colleagues (2020) was to see if there was a decrease in learning during the lock-down and if pupils from less-educated homes were disproportionately affected. The results showed that the pupils in the Netherlands learned less and lost two thirds of their expected progress whilst learning remotely. The loss in learning was also disproportioned, so that pupils from the disadvantaged homes had up to 55 % greater loss in learning compared to the general population (Engzell et al., 2020). Netherlands' situation during emergency remote school can be seen as quite similar to Finland's, as their school closure lasted for eight weeks and they had a high degree of technological preparedness (Engzell et al., 2020) as did Finland.

Niemi and Kousa (2020) investigated the perceptions about emergency remote school of students and teachers of one upper secondary school in Finland. According to them, students were generally quite content with the way remote school was implemented but thought that their own studies did not go so well. The most significant problem the students pointed out was that there were too many tasks to be completed and their workload grew significantly during this period, causing stress and fatigue (Niemi & Kousa, 2020). Interestingly, the teachers in the beforementioned study did not share the same perception with the students of giving them too many tasks and teachers also stated

that their students' performance was comparable to normal school time. In students' descriptions, when the remote schooling begun, at first they didn't mind it, but as the situation prolonged, it became very difficult for them as studying required more self-discipline and the problems they faced were more difficult to be solved without the presence of a teacher (Niemi & Kousa, 2020). According to The Trade Union of Education in Finland (OAJ) (2020b), Finnish teachers have evaluated that the ERS had a negative effect on some individual learners' ability to learn due to family situations and self-management skills of pupils. Findings in School Barometer conducted in Germany, Austria and Switzerland show together with prior research that support in the day-to-day management is needed by students for working independently (Huber & Helm, 2020).

Although less was obviously learned during the ERS than would be normally learned in face-to-face settings, the very experienced teacher in Kaden's (2020) single case study in Alaska points out that for some of his secondary students, the ERS might have worked positively in a way that led them to gain personally relevant knowledge and important new life skills along with learning how to take charge of their own learning. These are dimensions of learning that cannot be measured in standardized testing. In Kaden's (2020) study, the teacher stated that daily communication with his students was the key to successfully engage them with schoolwork, along with tailoring assignments to students' interests. Giving instant feedback helped to keep students motivated (Kaden, 2020). Feedback from schoolwork is important for learning in all school settings, so Huber and Helm (2020) call for regular monitoring over the learning process and formative feedback as a minimum standard for schools. Humanizing digital instruction so that the students' need for personal connection with their teachers in a safe environment would be met (Kaden, 2020), and caring for individuals before getting preoccupied with tests, scores and educational outcomes (Baird, 2020), can be seen as very important aspects of teaching remotely. Bozkurt and Sharma (2020) remind that when things return to normal, pupils will not remember the subject matters delivered during emergency remote school, but instead they will remember how they were feeling and how they were being supported and cared for. Therefore, an approach of pedagogy of care in this kind of a time of crisis will carry further than simply bombarding learners with educational content (Bozcurt & Sharma, 2020).

The lack of social contact with peers was experienced as a problem by especially more socially oriented students (Kaden, 2020; Niemi & Kousa, 2020) and many students expressed not having motivation for school while studying from home (Niemi & Kousa, 2020). Some students also found positive aspects of remote school, like being more focused in distance discussions than in a face-to-face setting or having more flexibility with their own timetables (Niemi & Kousa, 2020; Kaden, 2020). Especially more socially reserved students enjoyed working at home, as socializing in school can be intimidating for some, or the pressures of fitting in and looking good distract them from schoolwork (Kaden, 2020). Three quarters of the teachers in OAJ's (2020b) inquiry also thought that learning remotely could have had a positive effect on individual pupil's learning and every sixth teacher thought that the ERS had a positive effect on a large number of learners. According to teachers, the positive effects have been seen among learners who suffer from anxiety, difficulties to concentrate, oversensitivity, or who have been bullied in school (OAJ, 2020b). Kim and Asbury (2020) reported of a few examples, where the teacher noticed that their pupils were more engaged with schoolwork, when they were not physically in school and there were "surprising stars", who shone while working from home. All in all, still most students missed going to school (Kaden, 2020; Niemi & Kousa, 2020) and participating the hands-on activities there (Kaden, 2020). The teacher participating in Kaden's (2020) study estimates that at the end students learned to appreciate their school and teachers in a new way as a result of the time of not being able to physically go to school.

2.2 Teachers' perceptions of teaching during the ERS

According to Niemi and Kousa (2020), the general tone in teachers' stories about teaching remotely was positive, but also worried as teachers felt that teaching lacked many valuable elements found in normal school life, such as spontaneity found in in-class teaching and in creating real interactive relationships with students. The core characteristics of teacher's profession is about planning and routine, being in the classroom and interacting with others; where being not able to do this could in the long run have implications to job satisfaction and attrition (Kim & Asbury, 2020). Participants in Kim and Asbury's (2020) longitudinal interview study of 24 teachers described that the uncertainty of the situation, especially in the beginning, caused negative emotions,

rush and panic and they were bothered by not being able to give answers to the questions of their distressed pupils about the situation at hand. Niemi and Kousa (2020) add to this that further worry was caused by students who remained silent during video conversations and it was seen difficult to push those students forward, even when they were in danger of falling out of the schoolwork. Teachers especially had great concerns about vulnerable pupils, whose conditions at home were not safe due to domestic violence, or who didn't have enough to eat (Kim & Asbury, 2020).

While according to Kim and Asbury (2020), concerns about the vulnerable pupils was the greatest factor causing stress for the teachers, another significant factor that made the situation difficult was the increase in teachers' workload during the ERS, compared to normal (Ahtiainen, et al., 2020; Giovannella, Passarelli & Persico, 2020; Huat See, Wardle, & Collie, 2020; Kaden, 2020; Kim & Asbury, 2020; Niemi & Kousa, 2020). In Finland, the universities of Tampere and Helsinki carried out a nationwide collaborated study to examine how the closure of schools affected children's education, work of teachers and other schools staff and the wellbeing of families (Ahtiainen, et al., 2020). Data for this study were collected in May and among the participants there were 5361 teachers from 853 schools in 218 municipalities. Results show that the majority of the teachers (89%) experienced that their workload was greater or significantly greater during the ERS than normally. Teachers had to redesign whole course materials leading to a situation, where they spent a lot more time planning than they would normally do (Niemi & Kousa, 2020) and the workload was especially straining in the beginning of teaching remotely (Kaden, 2020; Kim & Asbury, 2020). According to Huat See and colleagues (2020), primary school teachers were affected by the increased workload even more than the secondary or tertiary teachers. Boundaries between the work and home life were getting blurred and particularly for those with small children, the situation was hard as they had to joggle between helping their own children with schoolwork and teaching remotely (Huat See et al., 2020; Kim & Asbury, 2020).

As teaching remotely unfolded, teachers had to adapt to using technology in a scale, that many had never done before (König, Jäger-Biela, & Glutsch, 2020). Teachers generally learned to use technological platforms quickly and technology was not seen as a problem for them (Niemi & Kousa, 2020; Giovannella et al., 2020). In the study conducted in Finland, 94 % of participants reported that their technological skills developed during the

ERS at least to some degree and 69% estimated that they had learned skills that they will use in their future work (Ahtiainen, et al., 2020). König and colleagues (2020) investigated how early career teachers in Germany adapted to teaching online during the school closure. According to them, the majority of the participants had succeeded in introducing new content, assigning tasks and giving feedback to their pupils, but online teaching and assessment were not mastered so well. Self-efficacy of teachers in using technology is a significant factor in how well they succeed in task differentiation and giving valuable feedback to their pupils (König et al., 2020). Teachers' competencies in using technology is linked to the resources they have in schools and they start to engage with digital teaching when they have access to appropriate technical equipment (Huber & Helm, 2020). Therefore, those teachers who were in an advantaged position when the ERS started were those who had already used digital tools in teaching and had access to them (König et al. 2020). The problem for some teachers during the ERS was the lack of access to technological infrastructure and digital devices for working from home (Huat See et al., 2020). In the Finnish study, majority of the teachers reported of their own technological infrastructure at home working sufficiently for the needs of the ERS and 71% had a device provided from their employer; while the technological infrastructure of their pupils was not experienced to be working as well and teachers experienced that there were problems especially in the networks that their pupils used (Ahtiainen, et al., 2020).

While the participants in Kim and Asbury's (2020) study reported providing their pupils work packs in paper or email and online options, such as narrated Power Points, videos and access to educational websites, full synchronous teaching was not delivered. Instead, in Giovannella and colleagues' (2020) study in Italy, most of the teachers attempted to reproduce classroom dynamics by delivering synchronous video-lectures and assigning homework to be realized individually. Only 12% of the teachers in this study reported of organizing more innovative activities for their pupils and this may indicate the limited pedagogical or technological preparedness, or simply the aim to minimize the workload by avoiding designing new activities and going beyond traditional and transmissive methods (Giovannella et al., 2020). Replicating in-person classroom situation online should not be the goal of teaching remotely (Kaden, 2020), although it might have worked as a "comfort zone" for the teachers, from which to venture into more creative ways to teach remotely (Giovannella et al., 2020). The teacher in Kaden's (2020) study described that it was much more motivating for his students to have the freedom to select activities

that were suitable for their surroundings and based on their interests, instead of trying to recreate normal school. In his online lessons, the same teacher used video-reporting, digital storytelling and science explorations in the backyard in order to make learning more fun and to carry out individualized assessments (Kaden, 2020). When it comes to evaluation, according to König and colleagues (2020) online formative assessment was employed during the school closure and this could have happened through online quizzes for example. Niemi and Kousa (2020) point out that some teachers felt like they had a good opportunity to follow learning via the online platform they used, as their students shared documents and asked for help when needed. On the other hand, many teachers told that they could not really know how much had been learned. The main concern considering evaluation seemed to be the uncertainty of the reliability of examinations and tests done at home, and if the evaluation could be relied upon (Niemi & Kousa, 2020). When the fully reliable evaluation was needed, like in the case of final exams, they were in some cases organized in small groups at the school premises (König et al., 2020)

Teachers have also found positive aspects of the ERS. Among those were spending more time with pupils as individuals and using creativity more freely in their work while teaching remotely (Kaden, 2020; Kim & Asbury, 2020). Even though the sudden situation caused uncertainty among many teachers, there were some - mainly those with long work history and in senior leadership positions - who described getting a sense of accomplishment by the interesting challenge they faced (Kim & Asbury, 2020). Some teachers described a sense of competence and relief as they managed to get pupils who were not engaging with activities provided back on track with studying (Kim & Asbury, 2020). By some teachers the situation was also seen as an opportunity to learn new skills that could be useful for their career in future (Huat See et al., 2020). Kaden (2020) argues that as a result of the ERS experiment, new and more effective ways in education could be gained. These could include widening the technological orientation of education and moving out from old fashioned method of teacher dictating schoolwork (Kim & Asbury, 2020).

Kim and Asbury (2020) point out that the teachers value highly the relationships with pupils and their families as well as other teachers along with contact with the wider teaching community. Even though a few teachers participating in their study got some negative feedback from the parents of their pupils, relationships with families were

mostly seen as a protective aspect and many reported that the trust between parents and teachers increased during the ERS. Huber and Helm (2020) remind that schools with a supportive culture of collaboration are more likely to do well in challenging times, like the emergency remote school. In the Finnish study, the teachers' collaboration with their colleagues was divided so that one third of the participants reported of more co-operation, one third the same as usual and one third told that they co-operated less with their colleagues (Ahtiainen, et al., 2020). Co-operating more with colleagues is something that should be encouraged if a similar situation happens again, as support from familiar colleagues and a sense of belonging to their work community are seen as nurturing elements for teachers in the difficult setting (Kim & Asbury, 2020).

2.3 Inequality of learners during the ERS

One of the main concerns about school closures was that it would widen the gap in learning between children from different socioeconomic backgrounds. In the UK, even one month of school closure caused more educational loss for pupils from disadvantaged socioeconomic backgrounds (Pensiero, Kelly, & Bokhove, 2020). This widening of the gap in learning between groups of different socioeconomic status (SES) is strongly related to the resources that are available for the students from different backgrounds, such as the lack of computers and reliable internet connection as well as other resources at home, such as not having a suitable place to do homework properly (Kim & Asbury, 2020; Pensiero, Kelly, & Bokhove, 2020; Van Lancker & Parolin, 2020). In USA, some of the most vulnerable students could not be reached at all during the school closure, including homeless students and students living in poverty (Kaden, 2020). To measure the ability of families to provide support for studying from home, Andrew et al. (2020) used income of UK families as an indicator to find out that 58% of primary school children from the lowest SES families did not have access to their own study space while their counterparts from high SES families had better home set-ups and other resources. SES of families was also found to set children in unequal positions in learning opportunities in Jægera and Blaabæk's (2020) study, where they examined families' takeout of digital children's books from public libraries in Denmark. Affluent families used libraries more successfully during the pandemic than low SES families (Jægera & Blaabæk, 2020). Andrew et al. (2020) also point out that in UK inequality is created when the high SES

families' children attend in more resourced private schools and also hire private tutor to help their children in studying. In Finland on the other hand, all schools are free at all levels and the principle for education is that the same educational possibilities are available to all citizens regardless of their ethnic origin, wealth, age or where they live (MEC, 2017). Therefore, in theory, all children in Finland should have had the same opportunities to learn even during the ERS.

Remote learning places more responsibility of learning to parents and guardians (Garbe, Ogurlu, Logan, & Cook, 2020) as families' support in the success of learning from home is crucial in providing motivational and academic support (Pensiero et al., 2020). Andrew et al. (2020) found out that in addition to the better material resources, parents of higher SES families felt more confident in helping their children with schoolwork, as they also have completed higher education. The amount of time and support available from parents for their children to learn from home in each family varied greatly but especially for very young pupils, supervision in person for home learning is a better option than relying on online guidance (Andrew, et al., 2020). Garbe et al. (2020) investigated the experiences of parents and guardians with remote learning. 62.3% of parents stated in their survey that they spent more than one hour daily with their children helping them with schoolwork while schools were closed. Because Garbe and colleagues (2020) invited volunteers for their study via social media, it is likely that parents who participated in their study had internet access in their home in order to make the survey, and therefore they were better equipped for remote school already. This shows that the results reflect an already advantaged group of parents' participation in their children's schoolwork, but in reality the average time spent helping children is a lot lower. Inequality in the possibilities to succeed in emergency remote school was tied to the effort that parents and guardians were willing and able to contribute to help their children with studying. To compensate for the inequal opportunities learners have due to resources and support from home, Huber and Helm (2020) call for extra effort from the schools, so that the gaps in learning between the children will not increase. Positive discrimination in terms of supporting those schools that have relatively more disadvantaged learners is needed to alleviate the burden caused by inequality (Huber & Helm, 2020).

3 Emergency remote school in Finland

In Finland, teachers have a great level of pedagogical autonomy, in how they implement the national curriculum (Koskela, Pihlainen, Piispa-Hakala, Vornanen, & Hämäläinen, 2020). This is generally seen as one of the reasons for high learning outcomes in Finland (Niemi & Kousa, 2020). Teachers decide how to teach the shared content provided by the curriculum (Koskela et al. 2020), make decisions, take a leadership role in their work, and make plans in different kinds of situations and contexts within the framework of the curriculum and regulations (Niemi & Kousa, 2020). Professional and moral responsibilities are strong among Finnish teachers where their professionalism develops through five years of academic education and additional training along with their career (Niemi & Kousa, 2020). The sudden transition to the ERS seemed to go without major problems in Finland and 70% of teachers who participated in the inquiry conducted by OAJ (2020b) stated that the organizing of teaching was generally working well. Despite that, from the beginning there were differences in how schools, teachers, pupils and their guardians experienced this transition as some schools and homes were better prepared for the move to digital learning than others (Ahtiainen, et al., 2020).

Koskela, Pihlainen, Piispa-Hakala, Vornanen, and Hämäläinen (2020) conducted a study in Finland on parents' views on accommodating to the ERS. Their data were collected during the first weeks of school closure and revealed great variation in the parents' experience, on how the school supported them as parents and their children in the beginning of the ERS. As revealed by Koskela et al. (2020), teaching remotely was experienced to be fragmented in quality, as the parents' reported both good and challenging experiences. Similar views were reported by Helsingin Sanomat in their article on the 30th of April 2020, where they published results of their inquiry to pupils, parents and teachers about the ERS experiences (Aalto, 2020). There were a lot of experiences where the teacher was in contact daily via phone or some video-conference platform with their pupils and took full responsibility for their learning, but also many experiences where the teacher only sent lists of tasks to be done and learning was left to the responsibility of the pupils themselves and parents (Aalto, 2020). In addition to varying ways to teach their pupils, different teachers have also used different platforms for teaching remotely and even within one school there has been many platforms in use and that might have confused pupils. Therefore, pupils in the study by Ahtiainen and

colleagues (2020) hoped that if the ERS situation happens again in the future, studying would be centralized to one digital platform instead of various ones that were used this time. To have more consistency on the practicalities of teaching remotely, many parents have hoped for better national guidelines for the ERS, if a similar situation happens again in the future and schools have to operate remotely (Ahtiainen, et al., 2020) and for all the pupils to have equal possibilities to learn, better practices have to be adopted by all the teachers nationwide (Koskela et al. 2020). This would also mean that teachers should have equal resources to equipment in their use, like mobile phones to keep in contact with their pupils. Now, only 44% of Finnish teachers had a mobile phone provided by their employer and the rest had to use their own (Ahtiainen, et al., 2020; OAJ, 2020b).

The Finnish Education Evaluation Centre (Karvi) examined what good practices teachers and principals thought that the ERS had bought into teaching (Karvi, 2020). Significant part of responses in their data showed that the skills in the use of digital equipment and different platforms in studying got remarkably better during the ERS. Another aspect that was mentioned by the participants as a good practice learned from the ERS was that teaching remotely could be used also in normal circumstances to support independent learning of individual pupils and to differentiate learning according to different skills and abilities of the learners. If there was a case for example, where for some reason a pupil could not come to school, by using remote learning tools it would be possible to support the learner during their absence (Karvi, 2020).

4 Digital tools for remote teaching

In this section the main digital tools used by the teachers interviewed for this study during the ERS will be introduced. In most Finnish schools the school administration software Wilma is in use (Visma, 2020). In Wilma, guardians and pupils can be in touch with teachers, report absences and monitor grades. Schools can post bulletins, timetables and homework through it (Visma, 2020). Wilma was the most basic tool for communication between teachers, guardians and pupils during the ERS, but it was thought that just sending a list of tasks through Wilma to be completed was not really sufficient as teaching remotely (Aalto, 2020). To have interactive lessons online, in the municipality where this

study was conducted, there were the G suite for Education tools in use. Google Meet was used by the teachers for videoconferences with their pupils. In addition to Meet-conferences, another digital platform from Google that was widely used in the daily ERS was Classroom, where teachers can share material for learning, assign tasks that are also returned there, and feedback can be given to pupils (Google, 2020). In Classroom the teacher can also communicate with pupils via instant messaging (Google, 2020).

Along with Meet-conferences, contact with pupils was sometimes kept via WhatsApp. WhatsApp is a free instant messaging application for smartphones that uses internet connection, so no fees for messaging and calls have to be paid (WhatsApp, 2020). WhatsApp was used by some teachers, when it was not possible to talk to pupils in videoconferences and they wanted to have a personal call with an individual pupil. It was also used to give pupils tasks and to send pictures of completed tasks to the teacher. Using this application with primary school children caused some controversy, because the age limit for using it in the European Union is 16 years (WhatsApp, 2020).

Sanoma Pro is the leading provider of learning solutions in Finland and their materials for learning were widely used during the ERS, as they provide digital learning materials in all of the subjects in the Finnish curricula and their learning platforms are easy to use while teaching remotely (Sanoma Pro, 2020). Many schools already had licence for these materials and as the ERS unfolded, they opened their materials to be used freely by Finnish teachers nationwide. Many teachers had used these materials before and they were convenient to use while at a videoconference by sharing the teacher's screen.

Another platform that is not so widely used, but was mentioned by a participant of this study, is Studeo.fi. They also have course materials based on the Finnish curriculum that include text, video, interactive content and integrated applications for learning as well as exercices and tests (Studeo, 2020). Teachers can add and share their own content for teaching and they have access to teacher's materials and guides, while this platform also provides a tool for evaluation and assessing pupil's individual needs (Studeo, 2020).

The last platform for learning used during the ERS that will be introduced here is ViLLE. ViLLE is a collaborative learning platform that was developed by the Centre of Learning Analytics of the University of Turku, that offers learners and teachers detailed

information of the learning process in the form of immediate feedback and analytics of learning (University of Turku, 2020). As most of the exercises are automatically assessed, more time is left to the teacher to support their pupils with learning. The materials include mathematics, Finnish, English and programming and teachers can freely use whatever materials suit their needs, while pre-made Learning Path courses make the use very easy. Teachers can organize exams in ViLLE, where teacher can keep track of their pupils' progress via the monitor view. The results of the tests are available to the pupils immediately after assessment (University of Turku, 2020).

5 Methods

The main research question of this study was "What were the primary school teachers' experiences of teaching during the emergency remote school (ERS) period due to the COVID-19 crisis in one Finnish city in spring 2020?" To support the main question, following sub-questions were formed:

- How did the teachers organize teaching in practice at different grade levels in primary school during the emergency remote school period?
- What challenges did teachers perceive for pupils and for teachers during the emergency remote school period?
- What positive aspects did teachers perceive of the emergency remote school?

5.1 The Design of the Study

This study is a qualitative study. In qualitative research, the interest is in uncovering the meaning of a phenomenon for the participants and in understanding how the people involved interpret their experiences (Merriam & Tisdell, 2015). The aim in qualitative research is to reach the personal descriptions of reality as experienced by the participants (Vilkka, 2015). In this study, the experiences of eight Finnish primary school teachers in their work during the school closure due to COVID-19 crisis were examined and analyzed. The foundation of qualitative research is the belief that people construct knowledge by engaging and making meaning in an activity, experience or a phenomenon

(Merriam & Tisdell, 2015). In this case, the experience where the participants of the study had constructed their knowledge was teaching primary school-aged children remotely in a situation that nobody was prepared for beforehand. Interviews are the most common way to collect data in qualitative research (Merriam & Tisdell, 2015) and data for this study were collected by using semi-structured interviews.

5.2 Context and participants

Participants interviewed for this study were all working in primary schools in one city located on the west coast of Finland. The city in which they worked has a population of approximately 80 000 people. Participants worked in four different schools; the smallest of them having 33 pupils, while the largest had about 450 pupils in spring 2020. The number of pupils in each teacher's class ranged from 16 to 31. In the city where this study was conducted, pupils in all schools are equipped with Chromebooks from 4th grade onwards. This can be seen as a great advantage for the pupils of the city in question compared to the position of pupils in many other areas where such equipment for digital learning is not provided through the schools.

All eight teachers who participated in this study were females and seven of them had master's degree in education, while one was still studying to get her master's degree. Total work experience of working as a class teacher ranged from one year to nearly four decades. Among the participants, there was one teacher from each of 1st, 2nd, 4th and 5th grade levels, while there were two participants from each of the 3rd and 6th grades. The participants were accessed through the personal connections of the researcher via e-mails or telephone and asked whether they would like to volunteer for the study, after the researcher explained the purpose of the research and ensured about their privacy and anonymity. They all volunteered for the study. Table 1 presents teachers' years of experience, grades they taught, and the number of pupils in their classrooms and at the school.

Table 1. Participants' experience, grades they taught and classroom and school population

Teacher	Years of experience	Grade taught during emergency remote teaching period	Number of pupils in the class	Number of pupils in the school
Teacher 1	39	3rd grade	24	450
Teacher 2	1	5th and 6th grade	16	33
Teacher 3	15	3rd grade	23	450
Teacher 4	15	6th grade	17	400
Teacher 5	16	2nd grade	28	180
Teacher 6	5	4th grade	31	400
Teacher 7	25	1st grade	24	450
Teacher 8	27	5th grade	27	400

5.3 Data collection

Data were collected by semi-structured interviews where the questions addressed the central themes of the research problem to answer the problem (Vilkka, 2015). The questions in semi-structured interviews can be quite open-ended and flexibly worded (Merriam & Tisdell, 2015). The order of the questions is also flexible, while the aim is that the participants can give their own description of all the themes and the themes will follow a natural flow in the conversation (Vilkka, 2015). The interviews that were used as data for this study were all conducted using the same interview questions, but depending on the participant, the order of the questions varied as did also the depth which each participant went into answering the questions.

For data collection, an interview protocol of 10 main questions was prepared by the researcher. Under these main questions, there were 36 sub questions in total, and some even more detailed questions under the sub question. All the questions were revised based on the suggestions of a researcher experienced in qualitative research. All participants were asked the same main questions, but not always in the same order, as their answers naturally led to different paths and some spent more time with one question, whereas another participant would go into more detail in something else. Also, there was no need to ask every single sub question listed in the protocol to all participants, as the

conversation pointed some minor questions irrelevant. English version of the questions can be found in the Appendix 1 and Finnish version in the Appendix 2. Table 2 presents the main interview questions.

Table 2. The 10 main interview questions.

Main questions
1. Background questions 2. How did you organize teaching during the closure of schools? 3. How did your pupils perform? 4. Personal development as a teacher 5. How did your relationship with parents develop during this period? 6. How was your relationship with colleagues during this period? 7. Did you get support from school administration? 8. What in your experience were the most positive aspects of the remote teaching period? 9. What would you like to share with other teachers for possible future remote teaching? 10. Is there any question that you expected me to ask about remote teaching experiences, but I did not? Would you answer it now?

The first interview was conducted in early August 2020 and the last in mid-September. Six of the eight interviews were conducted remotely by using Google Meet-videoconference tool, and two were conducted face-to-face in person as it was the wish of the participants. Interviews that were conducted in person took place at the school where those participants were working after their school day. The interview questions were sent to the participants via e-mail together with a consent form, prior to the interview. The English and Finnish versions of the consent form are in the Appendix 3. All of the participants signed the consent form. All of the interviews were recorded with the participants' permission and the recordings were transcribed into text for analyzing after the interview. The recordings and the transcriptions were kept in a secure cloud service and in a computer that was password protected. No names, or personal details were recorded for ensuring the anonymity of the participants. The interviews lasted from 45 minutes to one hour and 25 minutes, depending on the participant.

5.4 Data analysis

According to Merriam and Tisdell (2015), in qualitative research, data collection and analysis are simultaneous activities, and analysis starts with the first interview. Data for

this study was analyzed from the beginning of data-collection using a basic inductive and comparative analysis strategy. It is a strategy suitable for analyzing most interpretive qualitative studies (Merriam & Tisdell, 2015). While collecting data for this study, the interview questions were thought of continuously and formulated further so that those themes that came up frequently were given more emphasis than those that didn't seem so important to the participants. The interviews were transcribed into text word by word as soon as possible after each interview and this process was also a part of analyzing, as listening the recordings again carefully gave the researcher more detailed picture of what had been said. The research questions were formulated again through the data collection and analysis, as more in-depth understanding of the content was gained.

After all interviews had been conducted and transcriptions were ready, the texts were read several times by the researcher and similar experiences and thoughts were organized into meaning categories, that responded to the research question. The following main categories were formed: (a) Practical solutions for teaching; (b) Challenges faced by teachers; (c) Challenges faced by pupils; and (d) Positive aspects of the ERS. Under each main category, there were multiple sub-categories, that will be discussed in the findings of this study. Because the interviews were conducted in Finnish, the quotes from participants in the findings were translated by the researcher.

5.5 Reliability

Traditionally it has been thought that the reliability of a research means that if the study was repeated, it would yield the same results (Merriam & Tisdell, 2015). Merriam and Tisdell (2015) continue that because human nature is never static, reliability in this sense is problematic in social science. Therefore, instead of expecting the same results for a research to be gained by replicating the study, reliability of a qualitative research means that the results are consistent with the data collected (Merriam & Tisdell, 2015). The findings of this study were revised by another researcher to evaluate their connection to the research questions and critical questions were asked to the researcher of this study to help to make sure that research questions were addressed within the borders of the data.

This way the claims and conclusions that the researcher made were ensured to be based on the data.

5.6 Internal Validity

The researcher had a personal experience of teaching for the whole duration of the emergency remote school and this might have impacted her interpretations of the interviews. However, while analyzing the data, it was kept in mind for the whole time that only the information present in the data was reported in the findings, not any personal experiences to the researcher. The participants of the study were accessed via personal contacts and some of them were teachers whom the researcher had worked with previously. Therefore, this might have influenced the participants' answers as they might have felt that they had to provide certain kinds of answers. It was made clear to the participants that their identity would be kept confidential, to reduce the obligation to answer in a certain way. The interviews started at the end of the summer break from schoolwork. The last of them were conducted when the schoolwork had already started and well under way, so especially in these last interviews the participants had already other things occupying their minds and they might have not remembered the details from a few months prior so clearly anymore. This could have affected on some of their descriptions as well.

6 Findings

6.1 Practical implementation of teaching during the ERS

In this section, the practicalities of teaching remotely during the school closure will be discussed. Participants had different approaches on which methods and tools they would use. Approaches chosen depended of the grade-level taught and whether the pupils had laptops to use from school or not. All of the teachers reported of having a laptop computer to use from their employers and also access to varying digital learning platforms.

6.1.1 Digital platforms and other tools used for teaching during the ERS

When schools transferred to the ERS over one night, everyone had to learn to use at least the video-conference tool Google Meet sooner or later for keeping in contact with pupils and teaching online. This was the tool that the council instructed to be used for keeping in contact with pupils in the city, where all the participants were working. In addition to Meet, Classroom was used as a platform for organizing daily schoolwork by the teachers of the pupils who were 4th graders and older and had laptops in their use. Classroom was used also by one of the teachers of 3rd grade, who had been working with laptops with her class and her pupils had laptops from school. For nearly all of the participants and their pupils, the web-based services that were used were either totally new or had been used only a little before. All of the participants reported that the deployment of these web-based services was easy, even if they had not used them before.

> *"Considering that we started from zero, I think it all went brilliantly. I mean that in the beginning there were, of course, those who didn't manage to return some task, or... or didn't notice to click some icon, but I could catch this really quickly, where the problem was."* (Teacher 4).

There were only some minor problems with the platforms used, mainly due to the large occupancy in the network at certain times that caused delays and some pupils dropping out of Meet-conferences. Many participants chose to divide their class into smaller groups for the Meet conferences as this made it work better and it was easier for the teacher to pay attention to everyone individually (T1, T3, T6, T7, T8). A good feature of the Classroom was considered to be that it was easy and efficient to check the returned tasks. This could have given teachers the feeling of having their pupils under their control as they would know exactly who had returned their tasks and who had not.

> *"And then it went very well also in terms of me explaining to them every time that I can so quickly check, if they have returned their tasks or not, that there is no point in telling me that they have done their tasks, and then at the end not... it was so clearly visible there (in Classroom) that I think it was brilliant for this kind of working, because it is such an enormous job for the teacher to find out and search*

where each and every one has returned and what, so for this it (Classroom) was the best..." (Teacher 4).

There were different approaches among the participants, on whether to use the mobile phone application WhatsApp as a means to communicate with their pupils or not. Three participants out of eight chose not to use it. The most common reason for this was that usually the teachers do not have phones from their employers and participants who chose not to use WhatsApp did not want to share their private phone number with their pupils (T5, T8). Only one of the participants had a mobile phone from work, but she did not see the need for using WhatsApp as her pupils were already 6th graders and did well on communicating solely through Classroom and Meet (T4). It seems, especially for those pupils who were 3rd graders or younger, the need for using WhatsApp was greater than for those pupils who were 4th graders and older, as they all had Chromebooks provided to use for their studying.

Using WhatsApp seemed to have had both negative and positive aspects. Some of the participants, who used it with their pupils said that as the remote schooling went on, their pupils started to contact them in rather personal matters and outside of school-related topics (T1, T2, T3). Pupils also mixed their free-time communication in the class WhatsApp group that was solely intended for communicating school-related matters (T1, T3). Those who experienced this situation discussed about it with their pupils and got the situation under control.

> *"... It was this kind of constant messaging that it started to get a bit... that it started to be a bit too personal, asking me for advice in everything, like "which milk should I take?", and I was like, "well that's none of my business, which milk you choose..." (laughter), so, so, too personal things, like what should I choose...[...] Then I had to make some rules in our WhatsApp group. --- It was that what to ask about – it is school, only things considering school."* (Teacher 3).

Returning tasks via WhatsApp and contacting the teacher on their personal phone number also caused nuisance, when pupils didn't keep the deadlines set for their tasks:

"I had asked for the tasks to be returned by 2 o'clock, so that I would have time to check them before 3 o'clock, if there was something to be corrected... It didn't work out... like everyday someone sent something at half past three... sometimes in the evening, or... like this... There were challenges in this, and then... this limit, was kind of blurry that then they also contacted me in completely other topics as well, so because I had to give my own number, well then my phone was beeping all the time... on the weekends as well..." (Teacher 2).

The positive aspects of using WhatsApp as a means of communication with the pupils were, that some of the participants who used it reported that they felt like having a very personal contact with their pupils (T1, T2, T7). It seemed that differentiating tasks according to individual needs was easier when the teacher had a personal contact with every pupil (T7). For the first-grade teacher, using WhatsApp was the only means of communicating with her pupils in the beginning of the ERS, when it was not possible to use Meet-video conferences yet due to the lack of equipment and parental aid. She established a schedule of daily "WhatsApp-hours" from 8 am until 1 pm, during which she would be available for calls and personal assistance. She reported that this worked very well with her young pupils and she had the feeling of knowing where every pupil was at in their learning. She made personal WhatsApp-calls with her pupils to support their schoolwork and to evaluate their progress, and also checked their tasks that were returned as photos via WhatsApp. Her experience was that checking the tasks and giving immediate feedback about them was very important in keeping every pupil up with learning. With the first graders, this would not have been possible in other ways.

"I think it was rewarding that my pupils were very happy about that, when they had sent me their completed tasks and I had checked them, then I returned them and they (pupils) looked straight away, if there was something to be corrected and then they sent me a new picture again. [...]I think it was quite important for them, that my head would appear every day into the mobile phone... they are like, so little still, they had the experience that I was still there all the time. [...] With the little pupils, the teacher is present, she is at the other end of the phone and she is looking at what I am doing... [...] They didn't feel like there was such a big distance with me that I kind of supervised what they were doing the whole time, so they would do it, because they are so little still..." (Teacher 7).

One of the digital tools that was used by all of the participants was the e-learning platform provided by Sanoma Pro. There were teaching materials that were convenient for teaching in video conferences when the teacher shared their screen with pupils and explained at the same time. These were experienced to be especially useful in teaching mathematics. Only two participants reported using the online learning platform ViLLE. The advantage of VILLE during the ERS can be seen in the possibility of giving immediate feedback to the learner of how they have managed in their tasks thus taking away some of the burden of checking the tasks by the teacher. ViLLE also gives information to the teacher of how their pupils are doing and where they need more support.

There were differences among participants in terms of the platform they used to announce the tasks for different subjects each day. One of them used Wilma, one used Classroom and the rest of the participants had their daily tasks as a shared document in Google Docs. T8, who used only Wilma to announce the daily schedule for her class reported that another teacher, who taught one subject to her class, announced the tasks of her subject in the Classroom instead of Wilma. This caused confusion amongst the pupils, as they didn't know where to look for the tasks in the beginning. However, regardless of which platform was used, it was common for participants with pupils from 4th grade up to make the daily tasks available for their pupils in the morning so that the pupils would start working on them on that day, and not the night before. For the younger pupils (grades 1-3), teachers made the tasks available in the evening or night before, so that their parents would have time to prepare their children for the next day.

For learning remotely, not only digital tools were used. One of the participants with the longest work experience as a teacher, who was teaching 3rd graders, gave all of her pupils a large notebook in the beginning of the ERS to do all their schoolwork in. These pupils didn't have laptops in their use from school and therefore they had varying resources provided by their homes for studying online. The idea of the teacher was that her pupils could collect all their daily tasks that were listed in the Docs and that they did, in this one physical notebook. She experienced this as a very good solution, as it gave her young pupils a concrete base for the schoolwork which could be kept as a memory for themselves from the unusual time of school. For the teacher, these notebooks gave an opportunity to see what her pupils had been doing during the ERS.

"I would use this kind of notebook again, if the same situation happened again. --So, so I think it is very good for primary school aged kids, and even older ones too, that they make something real. That it is not just a piece of paper somewhere, or it is not just hanging somewhere in the internet cloud..." (Teacher 1).

Videos found online and especially on YouTube and Yle Areena were important resources for teaching remotely. While many participants told that they used teaching videos made and published by colleagues around Finland, only T2 in this study reported of producing her own videos for teaching. But she also stated that she had the feeling that the pupils did not watch her videos, as for example, once she had put a task within the video and nobody eventually had done it. The issue of not knowing if pupils did what they were asked to do came up in many occasions in the interviews.

6.1.2 Structure and methods for teaching and learning during the ERS

Most of the participants followed the same daily schedule during the ERS that their class would normally have in school. The day would usually start with a Meet-conference between 8 am and 9.30 am, depending on the individual teacher. Only the teachers of first grade, second grade and the third grade, whose pupils didn't have laptops provided by the school, reported that there were no regular morning Meet-conferences in the beginning of the ERS due to the lack of suitable devices. As the ERS went on, these classes eventually got regular morning online video meetings established. In these morning online video meetings, the aim was to have a start for the school day together, to greet everyone, and to see how everyone was doing. It was important that the tasks of the day were discussed, and the teacher made sure that everyone knew what was expected from them on that day (T1, T2, T3, T4, T5, T6, T8).

From the morning meeting with 4th graders and older, their day usually followed the structure of their normal school schedule. Pupils started to work on the tasks in the morning after the morning meetings. Their teachers were available via Meet at certain times during the normal school hours to support their pupils with their tasks. For these age groups, there were also usually one or two lessons via Meet in addition to the morning

meeting. It was considered that keeping a daily routine as school-like as possible was important and working well (T4, T6, T8).

> *"Well, I thought that it was very good that kind of ... strict schedule, or just that the tasks had to be returned by a certain time. [...] for me it worked very well and for the pupils... if they had to... it would be difficult for them, if they had first been in Meet and other stuff, and then they were given all day time to do... then they would just be lazy, so I think it was clearer to wrap up the day by three o'clock, and then they would have the evening off..."* (Teacher 4).

Because the time available for video conferences was limited and not equivalent to the time that was normally available in school for teaching, all the teachers had to prioritize what was really important to teach and what was not so important. The younger the pupils, the more emphasis on teaching Finnish language and mathematics skills. The first-grade teacher stated that the administration of education advised such emphasis because those two subjects were in the center of attention for very young pupils as these were the skills that were considered the most important to achieve in the early school years. For older pupils, foreign language studies were also emphasized along with the Finnish language and mathematics (T2). The foreign language studies were challenging according to the participants, as there was no interaction between teacher and pupils, or it was seen as difficult through video conference (T2, T5). There was a variation in how different teachers experienced teaching certain subjects. Mathematics was the easiest and the most straight-forward subject to teach for some, partly due to the good e-learning materials they had.

> *"Mathematics was outstandingly easiest subject to teach remotely... [...] There is very good material from Sanoma, so you can show it through shared screen. [...] I think it is that kind of a subject, that goes on one thing at a time and there is no ambiguity in mathematics. Maybe that's the reason."* (Teacher 7).

On the other hand, some other teachers experienced mathematics as the hardest one to explain remotely. One of the reasons for the experienced difficulty in teaching mathematics could be the topic at hand, such as geometry, which was hard to transfer to digital format for teaching.

"Well... I don't know, I think everything was difficult to teach remotely. I think the interaction is so different... there, on screen. But teaching mathematics was extremely difficult, other things were easier. I think also that languages suffered also, when... I think that for example learning vocabulary, when it is left more to the responsibility of the pupil, then they don't read them as much." (Teacher 2).

"Mathematics was difficult to transfer, we had geometry period going on, so that was very difficult to transfer... [...] the programs are quite clumsy, so transferring everything ... so that I get a pyramid picture only there, it took a long time from me... [...] mathematics was quite a pain." (Teacher 4).

The time in Meet-videoconferences was not generally used for subjects, such as religion, as it was seen as something that could be taught through mainly discussion and it was not experienced to be very natural remotely (T3, T8). Also, physical education (P.E.), arts, crafts and music were the subjects that the majority of the teachers found suffering from the ERS period, as they included subjects requiring special materials or activities together as a group.

"Well I thought P.E. was difficult to teach remotely, it was like... there are all kinds of mobile phone applications and stuff that you could have downloaded, but I didn't want to go there with fourth graders and tie their families into that kind of a thing... well music was difficult... yes because we are a music class and we have four lessons per week of music... then yes, that was difficult because a significant part of our teaching music is singing together at this stage and it creates a sense of being a community... We all missed that a lot, the pupils and I..." (Teacher 6).

Some teachers experienced that traditional teacher-directed learning was reduced. One participant thought that the role of the teacher became stronger as she was leading her pupils to new pathways to independently gather information rather than giving teacher-directed lessons.

"I think the teacher gave those ideas and those tasks and the materials for the tasks and other stuff, so that was what led them (pupils) to new paths, not so much the

kind of... well: "So, here I am teaching you now..." that... that was reduced a lot, this kind of traditional way... (laughter) […] it was quite little that I gave them directly (laughter) instead it (learning) came through seeking and investigating. As a matter of fact, that was brilliant... […] Mathematics was the only one, where I went through the teaching... exactly, because... and we also went through tasks together at the beginning, like always... first page all together, and then you had the permission to move on at your own pace if you could handle it. But with some, I had to go through the whole chapter so that they could keep up..." (Teacher 8).

On the other hand, traditional teacher-directed approach was seen as the best way to teach in the ERS setting by some participants. Anything else was experienced as difficult to carry out, for example, due to the varying conditions pupils lived in.

"Well, I didn't go much into this kind of practice, that you have to start building something yourself out of some materials, because I was very afraid of putting my pupils to unequal positions, if someone lives next to a forest and it is easy to collect pinecones, when I have told to build five cows out of pinecones in half an hour, so then again, someone else lives in the center of town or something like this, so, so... I tried to keep in this... boringly structured teaching." (Teacher 4).

There was also feedback from the parents, when the task given involved too much parental involvement.

"Well, there was a complaint, when I had given a task that combined practical skills and craft and Finnish, where you had to write a recipe for blueberry muffins. Then, I got a complaint from someone, that "how can you give a task like this, that now my child is crying there, and I have to work remotely, that I should bake with her straight away, you just can't have this kind of a task that involves parents help!" So, for a moment, it did hurt my feelings, when I was just trying to come up with varying tasks for my pupils..." (Teacher 5).

6.1.3 Evaluation during the ERS

Teachers had to complete evaluation for the end of the year report in May. Therefore, it had to be nearly completed in practice by the time schools opened again mid-May. There are usually no tests for the first and second graders. Hence, their teachers gave their evaluations by using different ways also during the ERS. The teacher of the first grade stated that she evaluated her pupils with regular WhatsApp-calls, during which she would monitor the reading of her pupils. She also used pictures of the tasks completed of writing and mathematics that pupils sent to her via WhatsApp as a basis for evaluating their skills. For the older pupils, tests were conducted especially in mathematics and also in other subjects depending on the individual teacher. The most common way to organize a test was to use Google Classroom or Forms, where there was already a set format for conducting tests (T2, T4, T6, T8). Other mentioned ways to organize tests were ViLLE, which was convenient to test especially mathematics as it checks automatically the results (T3), and Studeo, which also had a convenient tool for testing (T6). The teacher in the very small school reported organizing a mathematics test so that her pupils picked the test on paper from her in school in a sealed envelope, completed it at home with their video conference open all at the same time, and returned the re-sealed envelope in her private mailbox while doing their P.E. task (T2). Formal tests were not the only means for evaluation. In the case of older pupils, who had laptops in their use and were returning their tasks to Classroom, the teacher monitored their performance constantly and there was enough material for evaluation even without formal testing.

> *"I didn't do many tests as there were so many materials to be evaluated already… that in my opinion replaced tests manifold. That was quite incredible, the amount that I received, there has never been such a base for evaluation before than there is now. [...] It was like: "Well, now I know what they are doing!" (laugher)."* (Teacher 8).

One difficulty for the teachers that was pointed out by many participants was the difficulty of knowing if pupils had completed the tasks by themselves, or if someone had told them the correct answers. Especially with younger pupils (grades 1, 2 and 3), there appeared to be adults in some homes who made sure their children had perfectly completed tasks and

answered correctly in tests. Their performance did not really reflect the skills of the pupils as their teachers knew of their prior performance.

> *"There were a couple of pupils, who in the first mathematics-tests in Ville got full points, and I was wondering how this was possible for this pupil in question? Then it turned out, that there were their parents doing the test with their children... So..."* (Teacher 3).

> *"Sometimes, when I was teaching through WhatsApp, I could hear some granny whispering there the correct answers and... like that was the point in here!"* (Teacher 7).

In general, none of the teachers let the ERS period have a negative effect on the evaluation in the end of the year report, unless they could clearly see that someone had just been lazy and purposefully left work undone, even when help was offered (T8). All the participants reported that in majority of the cases the pupils performed at the same level during the ERS as they would have performed at the normal time.

6.2 Challenges faced during the ERS

While there were reports from some of the participants that some of their pupils surprised positively with their extra output during the ERS, there were some pupils, who could not keep up with the independent work required in the ERS. Also, the teachers reported of many difficulties in doing their work, like managing the sudden increase in their normal workload. This section will look into the difficulties of both, the pupils and teachers as reported by the participants.

6.2.1 Challenges for pupils and support for learning

While all the participants stated that most of their pupils kept up the same level of work as if they were present in school and some pupils even exceeded this, there were reports of some pupils who could not keep up working independently and had several difficulties

in managing their work alone (T1, T3, T6, T7, T8). They were the ones that needed excessive support. If the support was not available at home, there was a risk of the pupil dropping out of the learning. Especially for the pupils, who were on the 3rd grade and younger, the support from home was very important; and because the youngest pupils didn't have the laptops to use from the schools, the inequality due to not having suitable equipment was clearly present as not everyone had even a mobile phone to use for schoolwork (T7). Especially in a case, where the family was living in a center for asylum seekers and the parents did not speak Finnish, it was very difficult for the teacher to ensure the learning of the pupil. Nonetheless, none of the participants reported of any pupils whom they had totally lost contact with, but all had cases where certain pupils had significant gaps in their learning. These pupils seemed to have challenges in self-management, didn't have enough support from home, or they were just simply lazy, and saw the ERS as an opportunity for not doing schoolwork (T5, T8). Also, for some families, the situation of everyone being at home all the time got somehow more intense, as not all families have ideal internal relationships (T3).

Weak self-management skills caused some pupils stress, as they couldn't keep up with tasks that were maybe located on different platforms, and timetables when meetings and tasks were due (T8). Motivation for schoolwork was remarkably lower for some pupils when they had to study without the peer and teacher support (T3). Pupils, who could manage well in school settings when the teacher explained and they had a lot of verbal interaction, struggled to keep up with their schoolwork due to the lack of sufficient interaction with their teachers (T8). It was noted that the interaction between the teacher and pupils was the key to successful learning and opportunities to have smaller learning groups were considered beneficial (T6).

> *"I think that the interaction between us (teacher and pupils) had a remarkable role in the learning. And it is probably also very comforting that it is this way... that it is the interaction with the teacher indeed... and the fact that I was there all the time... or, that I tried to control what they were doing... at that moment there. So I think that especially mathematics for us worked so well because there was a group of teachers teaching it together... and it worked so accurately at certain times and the class had been divided into smaller groups, so it was easier to control, what*

each and every one is doing... so I would say that interaction is the keyword here."
(Teacher 6).

For some pupils, the peer support is an important factor in keeping them motivated in school and they get motivated by showing their peers a certain level of performing. When this aspect of being part of a group was not there, their performance suffered.

> *"It was this kind of a class, where... how would I say...? That kind of a class where there were mostly pupils who do sports and that kind of pupils, who want to be seen as the best ones and that they are good and like this... and a few pupils joined this from the sides and also they did their tasks in school only because they wanted to be these sporty ones, even though they didn't get accepted to the physical education class next year. So, when we had to start the remote school, then they didn't complete their tasks, they were left undone... Tasks were undone..."* (Teacher 3).

Expressing knowledge through discussing in classroom situation and being active this way on lessons were not very convenient in the Meet-videoconferences. Therefore, the performance of pupils, who would benefit from participating through live discussions, was weaker.

> *"But then there were pupils, whose performance suffered, who had started to be very active on the lessons, then they clearly suffered from this, when there was not this kind of a habit of putting your hand up and showing your knowledge and asking questions, so their activity suffered..."* (Teacher 4).

Teachers reported of some pupils who seemed to use the situation as an opportunity to be quiet and hoped to become unnoticed (T8). Even when the help from the teacher and all materials and tools for learning were available, some pupils didn't know how to ask for help, or they chose not to (T1). Some learners needed a lot more personal guidance from their teacher, than others. One of the participants pointed out the difficulty of noticing the silent pupils, who were in need of support, as they don't ask for help.

> *"But usually they don't come there (to the open video calls with the teacher), the ones, who would need the help the most... [...] but I think that is the way it is*

working here in the classroom also, that the one who is all quiet - that's the one who I should go to - when you think, what's the matter, when she/he is being all quiet. Normally the ones who make a lot of noise, they are the ones that can keep up for sure…" (Teacher 1).

Teachers had the opportunity to monitor their pupils' learning and if they noticed tasks poorly done or not understood, many participants offered individual guidance. Some teachers used small group or individual videoconferences with those pupils, who were in need of more support (T3, T4, T5, T6, T8), and some used calls via WhatsApp to personally guide their pupils (T2, T7). It was clear that those teachers who had been teaching the same class already for some time knew their pupils well and were aware of those pupils who would most likely need help.

"So yes, here we can see that the class teacher really knows their pupils, so that I already knew those ones up for mischief, who would... and of course I followed those certain ones closer, what are they doing, or are they doing anything, and I also had those ones, who couldn't do anything by themselves... Well, then we had this kind of marathon Meets, even if there were only two pupils and I, and we might have been there until it was evening... until evening we did those undone tasks, but then we did them together... there's nothing you can do about it, if everyone can't do it, then they can't, so this way we took care of them, so they didn't drop out..." (Teacher 6).

Some teachers also told that they had the help of a school assistant organizing video conferences with pupils who needed extra support (T2, T5). There was variation in how the special education teacher was available for teachers in different schools. Even when the need for more co-operation with teaching staff specialized in learning difficulties was clearly present, the help came rather late in one of the teachers' experience (T8), while another one reported that the help was present from the beginning and worked very well (T6).

6.2.2 Challenges for teachers and coping with them

Especially in the beginning of the ERS, coping with the changed work situation was generally considered to be very straining. All the changed arrangements and having to come up with new ideas on how to teach and to engage pupils caused stress and insecurity among most of the participants. One of the participants described her feelings in the beginning as follows:

> *"So yes, I was really stressed out in the beginning, and thought that I won't be able to survive this situation at all. I got desperate, but then when it evened out, it became just plain depressive..."* (Teacher 5).

Participants indicated that the amount of work during ERS was considerably larger than what it used to be. This caused participants work many extra-hours.

> *"Well, the working hours didn't keep at all as they should (laughter), like, I did probably around a couple of hundred hours of extra work during the spring… and nothing of them (payment) has been received (laughter)… just layoffs for teachers (laughter)… yeah, the workload was, it was… massive!"* (Teacher 8).

One of the things causing considerably more work than normal was giving feedback for the tasks that pupils returned. Feedback was considered to be important for learning (T2, T8), but especially teachers with large classes eventually concluded that it was not possible to check everything (T6, T8). While some of the teachers kept dutifully checking and giving feedback for all the work their pupils returned until the end of the ERS (T2, T4), especially those whose classes were considerably larger noticed after the beginning that going through everything was not sustainable to their own wellbeing, and became somehow more relaxed. These teachers who decided not to go through all their pupils' work reported that they realized that maybe studying of subject matters was not at the end the most important aspect of all. Instead, the wellbeing of their pupils and themselves played a more important role in this new, and for some, also scary situation (T6, T8).

"... first I checked the tasks really like… awfully lot, I checked and checked and checked, until I noticed that there was no point at all… that I sat there all day long plus my own family here, that I just sat at my computer checking those tasks, so then I reduced it so that at the end I only eyed over them (the tasks) ... I had this kind of a chart, where I marked every day that this pupil has done this, this and this and then I kind of evaluated with some colored codes if it had been done well or poorly, or if there was something to be corrected and then, at the end – to tell the truth - it went so, that I only looked that; "these (tasks) have been done, good, this is enough" (laughter) [...] It was very straining (the workload), until I started to give myself a bit more mercy, that maybe this wasn't the most important thing here (laughter) ... like this." (Teacher 6).

"Well I would like to share with other teachers the feeling of caring, so that we would remember the human beings. Every home has their individual situation... and when you have to be at home so much all of the sudden, then what does that do to a person... I think we have to remember the wellbeing of people as a priority instead of the academic achievements where I also started from, until I hopefully understood something, that what is really important here (laughter)..." (Teacher 6).

Even though the Classroom was considered as a great tool to keep track of who had returned their tasks and who had not, the checking of the completed tasks in the Classroom was experienced also as time consuming and exhausting.

"It was very... I think the returning of the tasks was very problematic, because you had to really scramble through them there in the Classroom... Then, I tried to give feedback and write there, and they (pupils) thought that it was very important... [...] and the amount of pupils I have is crazy... [...] so I didn't always react to everything, but I did try to look as much as possible, and of course it was very slow... [...] and you'd have to know the ones who had returned nonsense... [...] but it was really like, very time consuming, it took me many hours per day (sigh)... " (Teacher 8).

Along with giving feedback for the tasks that pupils returned, most participants stated that more time consuming than in normal work was also preparing materials for teaching. The next day had to be thought through always in advance, as all spontaneity that was used to be in the face-to-face school settings was not there (T4). Participants spent considerable time searching for ideas for teaching in online forums for teachers and there was excessive sharing of ideas in the Finnish Facebook group for teachers and other networks (T1, T6, T7, T8). Although there were sharing of ideas among the wider teacher community, some of the participants experienced that the lack of working together with her colleagues and sharing experiences as a work community was hard (T1, T3, T5, T6).

> *"It was the greatest deficit, when I am like this... I like to be with people and talk about things and I'm always ready to share if someone asks me something... well I think here teachers were left all alone.*" (Teacher 1).

> *"I missed my colleagues a lot and I noticed when we got back to school, how significant is their role in this work."* (Teacher 6).

Many participants had the feeling of work and personal life not having a clear difference anymore (T1, T2, T3, T5, T6, T8). Some also reported of their physical well-being being affected by working from home and working for longer hours (T2, T8). Getting accustomed to a completely new situation caused stress and restlessness (T5, T8).

> *"I feel like I was pretty much working all the time, twenty-four hours per day, that's how it felt like... That I kind of lost weight and got tired, and (laughter)... It was so pervasive, that all the time I was thinking something like; "oh no, have I remembered...?" or "have I timed and marked and planned this and this and...? […] It was like getting out of breath all the time... […] It was like only work, the whole life..."* (Teacher 8).

Normal habits of exercise and personal life were pushed aside by the workload. The lack of moving around which comes normally in teacher's work, caused stiffness and aches.

> *"I could notice it in my body, that I was not moving around... I was like all stiffened up and when you think that normally during the day in school, I take about 7000*

steps and now I was taking about 1000... that is quite a big... practically I didn't move at all. Then I would feel it so that I was quite achy..." (Teacher 2).

While many of the participants felt that the overload of work remained until the end of the ERS, some managed to organize their work schedule as it went on so that they could establish a manageable pace to their work.

"I found a very good pacing for my work and forced my pupils into this pacing, for example the fact that the tasks had to be done by three o'clock, and my idea was that I had measured the daily tasks so that it took the school day to do them. Teachers who said that they put a deadline for the tasks to be returned at eight o'clock in the evening, well then, they were more or less tired, as they had to check the tasks in the evening and had to think again of them... So, in that way, the weight on the work somehow got lighter, when I learned to... somehow like... pace my work." (Teacher 4).

Although the workload increased and the new situation put the participants under pressure, there was also some benefits reported of not being physically in the classroom.

"But then again, the fact, that you were not in this kind of hustle and bustle all day and you could sleep later in the mornings and start your working day peacefully here at home, that gave me more personal resources. So that I didn't really experience that I was terribly more tired than usually, except in the beginning, when it started, and it was all new. That checking of tasks and giving new ones, that was... that was really hard, but when the normal in-class working and dealing with conflicts there and all this kinds of things was left out, then many straining things got left out, even though more was coming..." (Teacher 7).

Since everything was closed due to the COVID-19 situation and there were no possibilities to go to hobbies which many teachers normally had to rewind from work. Their ways to stay healthy and turn thoughts out from work were regularly getting outside to exercise (T5) or watching something on the TV (T1).

6.3 Positive aspects of the ERS and what was learned

The challenges that emergency remote school brought along for the teachers were presented until now. Although all of the participants experienced more challenges in their work due to the school closure and the emphasis was mostly in the difficulties, there were also positive aspects that stood out. In this section, the benefits that participants saw in the ERS and also what could be learned from this experience in case similar situation happens again or in general teacher's work will be presented. The final sub-section will present the participant's thoughts of how they assess their own performance in their work, during this special time and what kind of feedback they received from parents of their pupils.

6.3.1 Perceived benefits of learning remotely for students

The main thing that teachers mentioned as what was learned better during the ERS compared to normal school was the use of technology. All pupils from 4th grade and onwards had the Chromebooks distributed by the city where the study was conducted. It might be the first time that the technology was used by the students effectively and pupils got experience in using them diversely.

> *"I would say that everyone's skills with technology developed in a whole different way that they would in school, because normally we never use the devices that much, that we did now."* (Teacher 2).

Development of independent working skills was emphasized by some participants as those skills got stronger during the ERS (T7, T8). Even though there was a concern that pupils in primary school, even 6th graders, were not mature enough to study everything independently (T4), in the best cases the independence of some pupils took a leap forward (T7, T8). Teacher of the first grade noticed a considerable development in some of her pupils' performance towards more independent working skills:

"Independent work... definitely. When they didn't have someone to ask all the time, they learned maybe to trust... I had maybe three pupils, who clearly started to trust themselves that they can... They just started to independently work on tasks, to read what they had to do and to work on them, and when we returned to school, I noticed of three pupils, I was like "Wow! how she/he has progressed!", like this... like before they would have straight away asked; "How do I do this, what do I have to do here?", now they just read and started to do... [...] So, this kind of independence spurts could be seen with some pupils." (Teacher 7).

The setting of studying at home in pupils' own pace also worked well for some. They were the ones, who may suffer from noise and restlessness of a normal classroom situation and who don't enjoy being in a large group for some reason (T1, T3, T4, T6, T8). There were some pupils, that did more detailed work at home, than they would at school (T1, T4, T7), and some preferred being able to write with computer, rather than pencil and did their tasks better because of that (T4). Also, some pupils, who have a social pressure of playing some kind of a role in school setting, were found to concentrate better and to show their best qualities during the ERS.

"There was one boy, who has had a lot of behavior... how would I say... issues with behavior, well he turned out to be incredibly nice during this remote period. He was active, cheery, always positive and was happy every time someone came to the Meet-conference and was the first one to greet and ask how they were doing... When he had no one to fight with and he didn't have to win anyone or be the first one in a queue, or... or rush through, or physically be better than someone else... Then, he did probably the best schoolwork ever." (Teacher 1).

Some teachers thought, that their relationship got closer with some of their pupils as individuals during the ERS (T2, T6, T7, T8). They could now really see the individual pupils' work, as all of their tasks were returned to the teacher to look at.

"And on the other hand, they got the experience that the teacher noticed each and every one. Something that unfortunately never happens here (in school), during one day anyway, you can look at the amount of pupils here... there (in ERS) they could

get the attention, with anything, they produced their own output and the teacher always looked at that, too and then I noticed so well when you have like seen and listened to them..." (Teacher 8).

Some teachers also made personal calls with their pupils and that developed a closer relationship between them (T2, T7). There was an experience in some of the participants' statements, that they had the chance to give more individual support to their pupils.

"You could give feedback in a very different way individually and the support each and every one needed, when in the normal classroom it is not like that. So that I think this was the positive side that I very clearly saw of the tasks returned, what this pupil knows about this." (Teacher 2).

The relationship with the pupils' families was closer as experienced by the teacher of first graders. Because her pupils needed a lot of help from the parents, the teacher had to be very much in co-operation with the adults of families and she had the experience of their relationships getting closer than before (T7). This experience was specific with the very young pupils, as the teachers of older pupils reported that they didn't communicate more than normally with parents, as most of their pupils could manage schoolwork independently (T2, T4, T6, T8).

Some of the teachers were talking about the importance of being together as a community above all (T1, T6, T8). In their experience, after the chaotic beginning of the ERS, the understanding of the wellbeing of all people concerned in the situation – pupils, families and the teacher – was the most important thing and they experienced their class becoming more caring about each other. According to one of the participants, sharing of ideas among the pupils of her class increased and they were helping each other in schoolwork (T8). One of the participants pointed out the aspect of growing as a person due to the new situation:

"I think we learned a lot of one another and this situation and caring about other people and listening to others. We learned about it as a community. [...] I think we took a giant leap in growing up as human beings, and as our own community. A big

leap forward in how we care for one another, so... that, I think, is more important, than if the Finnish task had been done so well." (Teacher 6).

Another positive aspect that one of the participants brought out was the new appreciation for having the privilege of going to school (T3). She stated that when the schools went back in May, she could sense this new appreciation towards normal school and class community among her pupils.

"Well, I think that first of all the fact that one can come to school still and the school is nice, and this was from the pupils - that they are allowed to come back to school - and the school is still a nice place, so... I could notice this kind of... when they returned to school, they had this kind of "school is nice", that kind of positivity towards the school. I had the experience that they clearly wanted to come back to school themselves." (Teacher 3).

6.3.2 Teacher's personal development and what was learned during the ERS

The strongest theme among all the teachers, when asked about what was learned during ERS was clearly the new skills in using technology, which was mentioned by most participants. Those teachers, who didn't have very strong skills in using the digital equipment, reported getting help from their colleagues (T1, T8) or there were tutoring organized to help with technological skills (T1, T5, T8). Using the laptops in more diverse ways gave new ideas on how to use them also in normal schoolwork as a tool for teaching in the future (T6). Even the teachers, who already had competent technology skills, mentioned learning some new aspect of it during the ERS (T2, T3, T4, T6). The idea of teaching someone, who has to stay out of school for a longer period due to illness for example, via online platforms was presented (T1). This could be a good way to keep absent pupils along with learning with the rest of the class. Some of the participants mentioned that they created a wider material bank for themselves for teaching than what they had before as a result of the ERS (T1, T6, T8). Searching for materials for teaching in the internet also resulted in finding new and inspiring materials for future use (T1, T7). The process of creating all new ways for teaching was experienced as a positive challenge by one of the teachers:

"That was probably the biggest leap (technology skills), and overall all that, that you create a new... system, that surely was quite a thing. Quite rarely you get to experience something like it (laughter), when you like... in your own work you get all new equipment and systems... that you create and make... and, and, and... it was quite... a bit that kind of a feeling, that you can do anything (laughing), that you're not scared anymore so much of anything that could come, when you have exceeded yourself, you know? [...] And yes, probably professionally you had to challenge yourself every day and create and come up with new things. You were like in a creative mill, that was feeding you and then it was nice to notice that things would come up... (laughter), so for me it was a very strong experience... creative time (laughter), yes..." (Teacher 8).

Another thing mentioned that was learned, was learning to speak more clearly, when teaching (T2). It was mentioned by the teacher with the least work experience that because her pupils could not see her face as clearly as they would in a real face-to-face situation when teaching via Meet, she had to articulate more clearly and also slow down her speech to be better understood. One of the participants felt that her skills in fostering positive relationships with families of her pupils got even stronger than before and she gained more understanding of the varying circumstances that different children have at home.

"I think I learned even more of how to keep the contact with families, I have always managed to get trusting relationship there, but now I felt that I learned even more about that [...] so when you realize that how hard it is for those families, the parents have to organize and rearrange... let alone the single parents... and then there are those families with four children, out of which the first grader is the oldest... so here I learned a lot of understanding that the school here is not the priority for everyone, even though it is my job..." (Teacher 7).

Structured school days seemed to work well for both, the very young pupils and older ones. Those teachers, who made clear that they were available at certain times during the day and tasks have to be done due to a certain deadline, had an experience of being less tired and their work was experienced less strenuous (T4, T7). Also, for the wellbeing of

pupils, clear daily structure seemed to be a good practice (T4), although very little pupils were much dependent on their guardians and other adults in terms of when the schoolwork was possible to be done (T7).

A clear message from many participants to their colleagues - in case the same scenario took place again - was not to exhaust themselves with work, but to take care of their personal life and wellbeing.

> *"I would really emphasize that... that reducing the workload somehow, so... so that nobody would burn themselves out... [...] But it's easier said than done. It's hard, when most of the teachers have this kind of strong will to fulfill the curriculum..."* (Teacher 2).

> *"You have to continue you own life as well. If we ever get another period like this – and who knows how long it will be – then, how will your head cope with that? (laugh)... You have to take care of yourself. Like this."* (Teacher 5).

A hope for a better mutual planning and sharing of ideas among teachers was pointed out in case the same situation happened in the future.

> *"...There's probably a lot that someone else has invented, what I haven't even thought of, so I wish the others would share that with me. Sharing of ideas, to that we would really talk about this, so it doesn't get left with only thought of alone or just with one another person... It could be very fruitful to share all the ideas..."* (Teacher 8).

6.3.3 Teachers' self-evaluation and feedback from parents

In many of the interviews, the dedication of the teachers for their work was heard clearly. The general tone was that even though the workload during the school closure increased and was experienced as hard, the motivation to do one's work well was still high, and all of the participants genuinely aimed at doing the best they could. All of the teachers were generally thinking positively of their own performance during the ERS.

> *"I'm quite proud of myself, that I really did a lot of good work and tried my best... that I've never worked so much before! [...] I remember the first days, I was nearly crying and thinking that this is not going to work, and then I did it, and I tamed the situation and what came out, was such a gift... [...] So, I'm very pleased, of course not with everything, but I would give myself a good grade of this spring (laughter)... I surely didn't save myself (laughter)..."* (Teacher 8).

Feedback from the parents was mainly positive, good communication with families was kept up and the teachers received many encouraging comments during and after the ERS of their work. However, two of the participants told also about experiences of parents complaining about issues as too many or not enough tasks to be done (T5), some subject not taught properly in their view (T3), or evaluation that parents thought was incorrect for their child (T5). All in all, negative feedback was very rare in the experiences of the participants and mostly families of pupils showed appreciation towards the work that teachers were doing.

One of the participants wanted to send a positive message to all teachers and emphasized the importance of sharing of experiences with everyone:

> *"I would like to share the positive message somehow because I know that part of us experienced this in a very different way... I think... it would be worthwhile to use me (laughter) for those teachers who experienced this as a very narrow and miserable and somehow thought that the child cannot do it or learn and... and this is somehow terribly negative and... and learning is not happening and other things... Well because I experience this in a totally different way... That's why I would like to share my own positivity of what I saw and learned... those shining*

diamonds out there, so that everybody would get them and try many ways bravely.
I'm so happy that I tried so many new things, but I also think there are many things
that didn't even come to my mind, so I wish the others would point those out to me
and share their experience... that would really be fruitful!" (Teacher 8).

7 Discussion and conclusions

The purpose of this study was to examine how the class teachers in primary schools experienced working during the emergency remote school period due to the COVID-19 pandemic in one Finnish city and how they managed their work in practice. The findings showed that there were different approaches in how individual teachers organized their daily work and which tools they used. Differences were linked to the grade level taught, digital tools available for different age groups and also individual teachers' personal choices on how to manage their work. Teacher's pedagogical autonomy in Finland makes this kind of variation in the ways that they operate possible (Koskela et al., 2020; Niemi & Kousa, 2020).

In the literature, a concern of the varying quality of the teaching during the ERS was raised (Aalto, 2020; Koskela et al., 2020). When considering the pedagogical autonomy of the teachers in Finland, it is challenging to come up with a solution for making the situation more equal in terms of ensuring the same quality of teaching to everyone. In the findings of this study, there was an example of a situation within one school, where some teachers used different platforms in instructing their pupils about the daily schedule. For the pupils of those teachers, whose classes had some lessons with other teachers, there was a slight problem if teachers were using different platforms for communicating and pupils who were used to one platform with their class teacher didn't know where to look at for tasks from another subject teacher. The same problem was pointed out in the literature (Ahtiainen, et al., 2020). If a future situation of remote school comes up, at least within a school – or within a city - there should be clear guidelines for all the teachers about the platforms and practicalities they all use to prevent confusion and to provide consistency. A call for better mutual planning among the teachers as a community was evident. If all the teachers used same platforms to give their daily tasks which were open

for everyone to look at, the teachers would also be able to share their class' program with others and this way share their ideas for teaching.

Sharing the ideas with all the teachers within one city or even wider on shared platforms could reduce the experienced increase in the workload. The findings of this study are in line with currently available studies in terms of increase in the workload of teachers (Ahtiainen, et al., 2020; Giovannella, Passarelli & Persico, 2020; Huat See, Wardle, & Collie, 2020; Kaden, 2020; Kim & Asbury, 2020; Niemi & Kousa, 2020), which was a theme that came up with a strong emphasis in the interviews by most of the participants. As some teachers found a way to manage this workload sustainably for themselves as the ERS went on, some were heavily burdened until the end of it. One solution for making the workload lighter for teachers along with more sharing of ideas could be the use of such software that has the capacity to give automated feedback to pupils, such as ViLLE and Studeo, which were emphasized by the participants of this study. Not having to go through every task their pupils had completed and giving feedback on every standard task would give teachers more resources to concentrate on supporting those who are in need of more personal guidance. At the same time this kind of software would give the teachers valuable information for evaluation.

The different abilities of pupils to study at home due to their self-management skills and resources, such as digital equipment and parental support (Andrew, et al., 2020; Engzell et al., 2020; Garbe et al., 2020; Jægera & Blaabæk, 2020; Kim & Asbury, 2020; Niemi & Kousa, 2020; OAJ, 2020b; Pensiero, Kelly, & Bokhove, 2020; Van Lancker & Parolin, 2020), were pointed out by the participants of this study as factors affecting in the success to complete schoolwork remotely. The important factor in a time of crisis is caring for the individual (Baird, 2020; Bozkurt & Sharma, 2020) as discussed in the literature and in some of the interviews of this study, where the teachers emphasized the importance of this as a priority to the subject matters. Teachers being there for their pupils to support and to give feedback was an important aspect according to the teachers interviewed and the literature (Kaden, 2020; Niemi & Kousa, 2020).

Positive aspects that were found in the situation by some teachers interviewed for this study, such as getting closer to the individual pupils and being able to use creativity more freely in planning teaching, are in line with the literature and so are the reports that some

pupils surprised with their strong output during the ERS as well (Kaden, 2020; Kim & Asbury, 2020). The development of individual learning skills was seen as the best outcome of having to study without the teacher's presence at hand by some of the teachers (Kaden, 2020). Kaden's (2020) observation of increased appreciation for school during the ERS was shared at least by one of the participants of this study.

The results of this study indicate that some teachers felt that there was a better than usual opportunity to follow individual learners' work during the ERS via tasks returned online (Niemi & Kousa, 2020). At the same time there was a concern of the evaluation being difficult to carry out, as teachers could not be sure at the end, who had completed the tasks and if the pupils had really done them themselves (Niemi & Kousa, 2020).

Personal contact and support for the pupils were seen as important aspects during the ERS (Huber & Helm, 2020; Kaden, 2020; Niemi & Kousa, 2020). The literature shows together with the findings of this study that the presence of a teacher and peer support are very important to many pupils in keeping them motivated with schoolwork, although for some pupils learning at their own pace and without the social pressure of being in classroom works well (Niemi & Kousa, 2020; Kaden, 2020). There were indications in the statements of the teachers in this study that using WhatsApp was considered a good way to support the learning with the youngest pupils. At this special time of crisis, if parents give their permission to use such an application even though it has an age limit of 16 years, the use of it can be justified. To be a valid tool for the teachers there would have to be mobile phones provided for all the teachers from their employer, where now only 44 % had them (Ahtiainen, et al., 2020; OAJ, 2020b). Otherwise the learners are set in an unequal position again, as it is not fair to expect teachers to use their personal phone for work, even though some are more willing to do that than others.

Based on the findings of this study, for future situation of possible emergency remote school, in order to increase the wellbeing and sustainability of work for the teacher, teachers have to set personal limits for their work clearly and make their pupils understand the meaning of deadlines. It seems that it would be a good idea to have consequences when returning tasks later than the deadline. A clear, set daily schedule of studying and returning tasks would work well in balancing the life between school and personal time for both; teachers and pupils.

What could be used in normal schoolwork that was learned during this special time were the many possibilities of technology. In the city where this study was conducted, there was a good situation of every pupil having access to the laptops from the 4th grade onwards. Now as a result of the ERS maybe more benefits of those device will be utilized. When the teaching videos were used widely maybe for the first time, the idea of using them as homework to introduce pupils to new topics was raised. Watching a video as a homework prior to studying the topic in school could be a good way to introduce a new subject matter to pupils. This experience of teaching remotely could have taught teachers a new way to take care of learning of those pupils, who have to stay out of school for an extended period of time. More studies in the future are needed to gather wider knowledge of good practices in teaching remotely in other places as well, including those cities where pupils didn't have laptops to use as widely as in the city where this study was conducted. Also, studying the perspective of learners and their parents about their experiences during the ERS is needed to understand their experiences and to be better prepared for possible similar situation in the future.

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Interview questions

1. **Background questions:**
   a. For how long have you been teaching?
   b. What is your education?
      i. Have you done any minor studies?
      ii. When did you graduate?
   c. What is the size of your school?
   d. How many teachers work in your school?
   e. What grade levels were you teaching during remote teaching?
   f. How many pupils were there in your class?
      i. How many pupils were there in the other groups you were teaching?
   g. Were there any learners with special needs?

2. **How did you organize teaching during the closure of schools?**
   a. Did you keep daily schedule the same as normally or did you change it? Why?
      i. How were the school days structured?
   b. How did you keep in contact with your pupils? (medium used and how often?)
      i. Were you in contact with them after-school hours? How and with what purpose?
   c. What kind of online programs did you use for teaching?
      i. Why was this/were these specific programs used?
      ii. Did you already know the online program/programs, or did you have to learn to use them as you started the remote teaching?
      iii. Did the selected program work appropriately?
      iv. Did you have difficulties with the online programs? If so, what kind? How did you resolve them?
   d. How did you teach new content? Can you give examples of the methods you used?
   e. Did you use methods of active learning/learning by doing? What kinds of methods did you use? How? Can you describe how you used them?
      i. How successful were these methods in your opinion?
   f. How did you monitor completing of tasks?
      i. Did you find monitoring of completing tasks burdening?
   g. How/when did you give feedback to the pupils?
   h. How did you assign students with an end of semester grade?
      i. How much emphasis did you give to the performance of the pupils during the remote teaching period in terms of the end of the year grade?
   i. Did you manage to instruct pupils individually? How?
   j. Which subjects did you find easy/difficult to teach at distance? Why?
   k. What kinds of methods of teaching in your experience resulted in best learning outcomes? How can you determine this?

l. How schools will operate might change in the autumn semester. What kinds of practices would you continue to use if schools will have remote teaching?
    i.   Why do you want to use them?
    ii. What practices will you not use?
    iii. Why will you not use them?

m. In your own opinion, how did you succeed in your work during remote teaching?

3. **How did your pupils perform?**
   a. How would you evaluate the effectiveness of learning during remote teaching?
       i. Do you think your pupils would have learned more, if they had been in the classroom together? If so, what in particular was difficult for them to learn?
   b. Was there a change in the performance of individual pupils during the emergency remote learning? How would you describe the change?
   c. Did some of your pupils benefit learning out of school? How? Why?
   d. What types of pupils managed well during distance learning? Why do you think they managed well?
   e. Did some of your students, who normally do really well in school, perform weaker during the remote teaching period? Why do you think they did?

4. **Personal development as a teacher:**
   a. Remote teaching caught everyone rather surprisingly. What new skills did you learn during this period?
   b. When you think of your professional development, do you think you have learned something you have not learned until now as a teacher? What is it? How do you think it affects your teaching?
   c. Is there any practice that you developed during this period and would like to use in the future in your normal teaching? Why do you want to use it?

5. **How did your relationship with parents develop during this period?**
   a. Did you communicate with parents during remote learning period more than before?
   b. What kind of feedback did you get from parents about the teaching-learning process?

6. **How was your relationship with colleagues during this period?**
   a. Did you collaborate with your colleagues during the remote teaching period? How? (If not, why not?)
   b. How did you and your colleagues support each other during this process?

7. **Did you get support from school administration?**
   a. How did school administration support your work?
       i. How effective was their support?
   b. Were there any cases you needed support, but could not get it sufficiently? Can you give an example?

8. **What in your experience were the most positive aspects of the remote teaching period?**

9. **What would you like to share with other teachers for possible future remote teaching?**

10. **Is there any question that you expected me to ask about remote teaching experiences, but I did not? Would you answer it now?**

Haastattelukysymykset

1. **Taustatiedot:**
   a. Kuinka kauan olet toiminut luokanopettajana?
   b. Mikä on koulutustaustasi?
      i. Oletko opiskellut sivuaineita?
      ii. Koska olet valmistunut?
   c. Kuinka paljon oppilaita on koulussa, jossa työskentelet?
   d. Kuinka monta opettajaa työskentelee koulussanne?
   e. Mitä luokka-astetta tai asteita opetit etäkoulun aikana keväällä 2020?
   f. Kuinka monta oppilasta oli luokallasi?
      i. Paljonko oppilaita oli muilla opettamillasi luokilla?
   g. Oliko luokallasi erityisen tuen piiriin kuuluvia oppilaita?

2. **Kuinka järjestit opetuksen koulujen suljettuina olon aikana?**
   a. Pysyikö lukujärjestys samana kuin tavallisesti, vai muutitko sitä etäopetuksen aikana? Miksi toimit näin?
      i. Kuinka koulupäivät rakentuivat?
   b. Kuinka pidit yhteyden oppilaisiin? (Mitä välinettä käytettiin ja kuinka usein yhteyttä pidettiin?)
      i. Olitko yhteydessä oppilaisiin kouluajan ulkopuolella ja jos olit, mitä varten?
   c. Millaisia verkko-ohjelmia käytit opettamiseen?
      i. Miksi juuri tätä/näitä ohjelmaa/ohjelmia käytettiin?
      ii. Oliko/olivatko tämä/nämä ohjelma/ohjelmat entuudestaan sinulle tuttuja, vai täytyikö sinun opetella käyttö uutena asiana etäopetuksen alkaessa?
      iii. Toimiko käytössä ollut ohjelma tarkoituksenmukaisesti?
      iv. Oliko sinulla ongelmia ohjelmien käytön kanssa? Jos oli, millaisia? Kuinka ne ratkaistiin?
   d. Kuinka opetit uutta sisältöä? Voitko antaa esimerkin opetusmetodeista, joita käytit?
   e. Kuuluiko opetukseen oppilasta aktivoivia toiminnallisia työtapoja? Millaisia toiminnallisia työtapoja käytit ja kuinka ne toteutettiin?
      i. Kuinka toiminnallisuus mielestäsi onnistui?
   f. Kuinka valvoit annettujen tehtävien tekemistä?
      i. Oliko tehtävien tekemisen valvominen sinulle kuormittavaa?
   g. Miten ja milloin annoit palautetta tehtävistä oppilaille?
   h. Kuinka toteutit arvioinnin lukuvuoden päättötodistukseen?
      i. Kuinka paljon oppilaan suoritukset etäopetuksen aikana vaikuttivat lukuvuoden päättöarvinoinnissa?
   i. Onnistuitko oppilaiden yksilöllisessä ohjaamisessa ja kuinka toteutit sen?
   j. Mitkä oppiaineet olivat mielestäsi helpoimpia opettaa etänä? Miksi?
   k. Millaiset opetuksen tavat onnistuivat mielestäsi parhaiten oppimistulosten näkökulmasta? Miten sen voi päätellä?

l. Syyslukukaudella koulujen toiminta saattaa jälleen muuttua. Mitä etäopetuksen aikana käyttämiäsi menetelmiä käyttäisit jatkossa, mikäli etäopetusta jatketaan?
   i. Miksi käyttäisit näitä?
   ii. Mitä menetelmiä et käyttäisi?
   iii. Miksi et käyttäisi niitä?
m. Miten omasta mielestänne onnistuit työssänne etäopetuksen aikana?

3. Kuinka oppilaasi suoriutuivat koulutöistä etäopetuksen aikana?
a. Kuinka arvioisit etäopetuksen aikaisen oppimisen tuloksia?
   i. Opittiinko mielestäsi etäkoulun aikana yhtä paljon, kuin tavallisesti luokkahuoneympäristössä? Jos näin ei ole, mikä eritysesti oli oppilaille vaikeaa oppia etänä?
   ii. Mitä sellaista mahdollisesti opittiin, mitä koulussa tavallisesti ei opittaisi?
b. Muuttuiko yksittäisten oppilaiden suoriutuminen koulutöissä etäopiskelun aikana? Miten kuvailisit muutosta?
c. Hyötyivätkö jotkut oppilaat siitä, että he kävivät koulua kotoa käsin? Miten? Miksi?
d. Millaiset oppilaat suoriutuivat hyvin etäkoulun aikaisesta opiskelusta? Miksi ajattelet, että he suoriutuivat hyvin?
e. Suoriutuivatko jotkut tavallisesti hyvin koulussa menestyvät oppilaat huonommin etäkoulun aikana? Miksi ajattelet, että näin kävi?

4. Opettajan oma ammatillinen kehittyminen:
a. Etäopetukseen siirtyminen tuli kaikille äkillisenä yllätyksenä. Mitä uusia taitoja opit tänä aikana?
b. Kun ajattelet omaa ammatillista kehitystäsi, opitko etäkoulun aikana jotain sellaista, mitä et ole tähän mennessä oppinut? Mitä se oli? Kuinka ajattelet, että se vaikuttaa sinun opettajana toimimiseesi?
c. Kehittyikö sinulle etäopetuksen aikana jotain sellaisia käytäntöjä työssäsi, joita aiot jatkaa tulevaisuudessa normaalissa opetuksessa? Miksi haluat näitä jatkaa?

5. Kuinka suhteesi oppilaiden vanhempiin kehittyi etäopetuksen aikana?
a. Kommunikoitko tavallista enemmän vanhempien kanssa etäopetuksen aikana?
b. Millaista palautetta sait vanhemmilta etäkoulun aikana?

6. Millainen suhde sinulla oli työtovereihin etäkoulun aikana?
a. Teitkö toisten opettajien kanssa yhteistyötä etäkoulun aikana? Kuinka? (Jos et, miksi et?)
b. Kuinka opettajat koulussanne tukivat toisiaan etäkoulun aikana?

7. Saitko tukea työhösi koulun johdolta?
a. Kuinka koulun johto tuki työtäsi?
   i. Oliko tuki mielestäsi riittävää?

b. Oliko etäkoulun aikana tilanteita, joissa olisit tarvinnut enemmän tukea, mutta et sitä saanut? Voitko antaa esimerkin?

8. **Mikä sinun kokemuksesi mukaan oli etäkoulun ajan positiivisin ulottuvuus?**

9. **Mitä haluaisit jakaa toisten opettajien kanssa mahdollisesti tulevaan etäopetukseen liittyen?**

10. **Onko vielä jokin kysymys, jonka odotit minun kysyvän etäkouluun liittyen, mutta mitä en kysynyt? Vastaisitko siihen nyt?**

Consent Form for the Participants

I volunteer to be interviewed by Paula Taipale in a study conducted as a part of her master's studies at the Department of Teacher Education at the University of Turku. This study is about exploring the experiences of teachers in remote teaching in Finland during the COVID-19 crisis.

The interview will be in one-to-one setting using a video conference tool. Participation should be fully voluntarily. In the final report of the study, all answers will be anonymous. The interviewee may discontinue participating at any time without explanation, if considered necessary.

The interview will be recorded, and the recording will be stored safely in the University of Turku's data storage service, where other people have no access. The privacy of participants will be protected to the maximum extent possible. Paula Taipale and her supervisor will be the only persons who have the access to the data provided. After the study is finalized, the recordings will be destroyed.

By signing this form, I volunteer to participate in the study and give my permission to use the data I have provided in the interview.

Place and date _____ Name _____

Suostumuslomake

Annan suostumukseni siihen, että Turun yliopiston kasvatustieteen opiskelija Paula Taipale haastattelee minua pro gradu -tutkielmaansa varten. Tutkielmassa selvitetään luokanopettajien kokemuksia työssään koronaviruksen aiheuttaman etäopetusjakson ajalla keväällä 2020.

Haastattelu toteutetaan kahdenkeskisenä etähaastatteluna käyttäen videoneuvottelutyökalua. Tutkimukseen osallistuminen on täysin vapaaehtoista. Kaikki tutkimuksen tulosten raportointi tehdään anonyymisti, eikä tutkimukseen osallistuneita henkilöitä voida missään vaiheessa tunnistaa. Haastateltavalla on oikeus keskeyttää tutkimukseen osallistuminen milloin tahansa tutkimuksen aikana syytä ilmoittamatta, mikäli kokee tämän tarpeelliseksi.

Haastattelu nauhoitetaan ja aineistoa säilytetään turvallisesti Turun yliopiston tallennuspaikassa. Vain Paula Taipale ja hänen ohjaajansa saavat lukea aineistoa. Haastattelunauhoite hävitetään tutkimuksen valmistuttua.

Allekirjoituksellani vahvistan osallistumiseni tähän tutkimukseen ja suostun siihen, että haastattelutallennettani voidaan käyttää kyseisen tutkimuksen aineistona.

Paikka ja aika _____

Allekirjoitus _____