

## ARTICLE

### Changes and actions taken in online teaching during the first period of COVID-19: a teacher perspective on pupils' equity

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## Changes and actions taken in online teaching during the first period of COVID-19: a teacher perspective on pupils' equity

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### Abstract

The aim of this article is to explore a teacher perspective on issues of equity for pupils in online teaching during lockdown in the first period of the COVID-19 pandemic. Using the concepts of horizontal and vertical equity and equal educational opportunities adapted by Maiztegui-Oñate and Santibáñez-Gruber, we study how the changed conditions during online teaching affected issues of equity for pupils and what action the interviewed teachers took that promoted equity in teaching. The data was collected through interviews with twelve teachers in years 5–9, in Swedish-medium schools in Finland, from April to June 2020. Qualitative content analysis was used. The results show that the horizontal equity is robust, although the teachers noticed challenges related to access to teaching, especially in the areas of the changed forms of interaction, increased amount of texts and lack of structures. The teachers took different steps of action in all three areas e.g. emphasising keeping contact with pupils, clear instructions, use of digital affordances, feedback and structure, thus displaying pedagogical autonomy and creativity. By that the teachers promoted equal education for all. The study shows the significance of professional teachers' work in exceptional circumstances.

**Keywords:** online teaching, horizontal and vertical equity, teacher interviews, COVID-19, classroom interaction

## **Introduction**

Equity became an important educational topic when almost all teachers moved their classrooms to online settings due to the COVID-19 pandemic (see for example Andrew et al., 2020; Blasko and Schnepf, 2020; Carretero Gomez et al., 2021; Green, 2020; Kim and Asbury, 2020; Mælan et al., 2021; Mäkelä et al., 2020). Like in many other countries, all schools in Finland rapidly moved to online teaching in the middle of March 2020 for a period of about two months. Teachers, pupils, and parents were quickly forced to adapt to a new educational context: online learning from home.

In addition to mastering the use of digital tools in a new and complex situation and environment, a common concern for teachers was how to accomplish the school's mission to offer equal learning opportunities to all pupils. Several studies have already been reported examining online teaching from various perspectives, including equity (see for example Andrew et al., 2020; Mäkelä et al., 2020; Nilsberth et al., 2021a). However, relatively few qualitative interview studies were carried out very early during the pandemic.

The aim is to explore teacher perspectives on issues of equity for pupils in online teaching during lockdown in the very first period of COVID-19. The study is guided by two research questions: 1. What issues of equity for pupils were affected during online teaching? 2. What steps of action did teachers take that promoted equity in teaching?

The terms equity and equality are not univocal (Maiztegui-Oñate and Santibáñez-Gruber, 2008; Posti-Ahokas and Janhonen-Abruquah, 2021). In this article we use the term equity, when not explicitly referring to researchers using the term equality.

## **Background**

The Finnish National Core Curriculum for Basic Education 2014 (FNAE, 2016) stresses the value of high-quality education: every pupil is unique and has the right to equal opportunities to learn. This is in line with central pedagogical values in Nordic countries, where education is considered a key vehicle for forging a fair and equal society (Klette, 2018; Lundahl, 2016). Finnish education is often described as equal for all (Itkonen, 2018), and the national curriculum supports education that focuses on social justice and includes everybody in the concept of diversity (Zilliacus, Holm and Sahlström, 2017). Reflecting the Salamanca agreement (UNESCO, 1994), pupils with special needs are mostly taught in regular classes. The equity is nevertheless questioned, notably, when it comes to access to equivalent schooling, in terms of school choices (Kosunen, 2016), equal treatment, and equity of outcomes (Hummelstedt et al., 2021; OECD, 2019). A sign of horizontal equity (Maiztegui-Oñate and Santibáñez-Gruber, 2012, 2008), a central concept in this study (see below), in the Finnish school system might be the fact that low- and high-performing pupils are less often clustered in certain schools than the OECD average.

Adequate equipment for pupils and teachers is a premise of online teaching and therefore a key issue regarding equity. When the pandemic broke out, the Finnish compulsory schools were in the middle of a change towards a 1:1 solution – one digital device per pupil provided by the school – but there were

significant differences between schools in relation to how far in this transition they were (Tanhua-Piironen et al., 2020). Finnish schools are overall well-equipped in terms of digital devices and homes have a high level of access to the Internet and technology (Fraillon et al., 2019; Tanhua-Piironen et al., 2020). Thus, in the light of these surveys, the baseline for equal access to schooling can be considered stable.

Regarding online teaching during lockdown at the beginning of COVID-19 in spring 2020, several reports and articles highlight risks and challenges related to equity and social justice (see for example Andrew et al., 2020; Blasko and Schnepf, 2020; Carretero Gomez et al., 2021; Green, 2020; Kim and Asbury, 2020; Mælan et al., 2021; Mäkelä et al., 2020). The Finnish Education Evaluation Centre investigated the impact of the emergency conditions on equal and equitable preconditions for learning. This report pointed out areas affected by the pandemic, for example: different learners, learners' needs, individual support, self-regulation skills, and the digital and pedagogical competences of teachers (Goman et al., 2021).

This means that the pandemic and subsequent closure of schools in March 2020 raised questions of equity and whether online teaching can offer all pupils the same conditions to achieve the goals set by the curriculum. In this article we explore the question of equity from a teacher perspective. For a more specific discussion, we have applied the concepts of equality/equity adapted from Maiztegui-Oñate and Santibáñez-Gruber (2012, 2008). According to them, the concept of equity includes, but also transcends, different forms of equality. Equity refers to the concept of justice: "The notion of equity in education deals with educational justice and redistribution proportional to the needs of the individuals and communities in an effort to ameliorate the situation of the most disadvantaged groups" (Maiztegui-Oñate and Santibáñez-Gruber, 2008, p.375). Three different principles of equity can be distinguished. First, horizontal equity is about equal treatment of individuals in the same situation, while, second, vertical equity means recognising that people have different starting points – some pupils need to be equipped with more resources for horizontal equity to be achieved. A third principle of equity is equal educational opportunities. By critically directing resources to pupils, it is possible to achieve horizontal equity, and thus give all pupils equal educational opportunities. According to Maiztegui-Oñate and Santibáñez-Gruber (2012, 2008) within the area of educational equity, equality can be studied on four different levels: equality of opportunity, equality of access (to school), equality of treatment and equality of results. In this study we concentrate on two of these four: equity of access to school and equity of treatment. During the lockdown, the access levels came to be about access to computers, digital devices, and Internet, but also about competence to use the devices. In online teaching we recognise that equity of treatment can be understood, for example, in terms of more individualised forms of communication (cf. Mäkelä et al., 2020).

### **Access to school in new conditions**

A successful move from traditional teaching in physical classrooms to online teaching and learning requires readiness from both teachers, pupils and families. This readiness includes, in addition to devices and Internet connection, some competencies. A teacher with advanced ICT competence can

easily guide their pupils to grab the offer in the affordances provided by the digital and Internet-based resources and help them make the most of it (Wallinheimo, 2016). For pupils' good performance and readiness in online learning, in addition to ICT competence, factors such as self-regulated learning, self-directed learning, locus of control, and academic self-efficacy play important roles (Martin, Stamper and Flowers, 2020; Zimmerman and Kulikowich, 2016). For those who have readiness in online learning, the teacher's support may not be that crucial but without this readiness, the teacher's task to guide the pupil becomes essential (Golloher, Kassab and Cooper, 2020).

Despite reports showing a satisfactory level of digital devices in Finnish schools and homes (Fraillon et al., 2019; Tanhua-Piironen et al., 2020), 14% of teachers in basic education found that a lack of, or problems with, access to devices or Internet connections affected equity during online teaching (Goman et al., 2021) and 12% of pupils in years 4–9 reported problems with devices (KiVa Skola, 2020). In basic education, 20% of teachers reported that they were unable to be in contact with pupils in real time due to teachers' or pupils' lack of sufficient devices (Karvi, 2020a; OAJ, 2020). Furthermore, before the pandemic, Finnish classrooms were distinguished by a low use of ICT for teaching (Fraillon et al., 2019). Using ICT for self-regulation or working online with other pupils was rare in Finland (ibid.). The differences between pupils' digital skills are large – just under half of pupils in grade 8 can be called experienced ICT users and about a quarter of pupils have weak digital skills (Fraillon et al., 2019, see also Kaarakainen, Saikkonen and Savela, 2018). Across all participating countries in the study reported by Fraillon et al., (2019), pupils from socio-economically weaker homes were disadvantaged, as were pupils with fewer computers at home. The difference between pupils with immigrant backgrounds and those without were the largest in Finland.

Already in an early phase of the pandemic, researchers had drawn attention to the risk that pupils from socio-economically weaker homes could be more affected by the lockdown (Blasko and Schnepf, 2020; Di Pietro et al., 2020; QUINT, 2020b; Qvortrup, 2020). A little later, a British study reported that children from better-off families during the first lockdown period spent 30% more time on home learning than those from poorer families (Andrew et al., 2021; see also Blasko and Schnepf, 2020). Accordingly, there seems to be a risk that online teaching increases the significance of socio-economic background.

In addition, L2 pupils are considered to be a vulnerable group during lockdown (Goman et al., 2021). According to Barko-Alva, Porter and Herrera (2020), pupils from home environments that linguistically and culturally differ from the school may lack the readiness to meet the digital demands assumed by the school. The new conditions that the online teaching brings mean that the importance of the home increases, which further leads to a growing gap between pupils. Another group of students in a risk zone during online teaching are low-achieving pupils and pupils with low self-efficacy (Maelan et al., 2021). These results form a relevant backdrop for the analysis of pupils' equity from a teachers' perspective.

Even if teachers are aware of risks and challenges in online teaching, they are not necessarily able to act; in an interview study with British teachers about the first six weeks of lockdown, worries about

vulnerable pupils arose as a central theme in their narratives and they felt powerless to help pupils they were used to looking out for (Kim and Asbury, 2020).

In summary, previous studies highlight issues that were affected by the pandemic concerning access to school in terms of opportunities to learn. In addition to the importance of digital devices and the skill to use them, language background and the socio-economic status of the families rose as critical issues in relation to equity. While the homes got a greater responsibility for the children's school work, the teachers were the ones who had to face the demands and adapt their professional work in order to correspond to the demands of the curriculum.

### **Challenges and possibilities in online teaching**

Communication and interaction are crucial ingredients of teaching and learning processes, and classroom activities are essential for developing social skills. In online teaching, interaction is transformed and stripped of essential features of face-to-face interaction. In video interaction, the possibility to read body language is limited – if not totally deleted – neither teacher nor pupil can rely on gestures and body posture in order to communicate, which places high demands on teachers' ability to interpret when pupils require further support. Building on interviews with teachers during the pandemic, Nilsberth et al. (2021) describe digitally mediated teaching as flat, less dynamic, and more monologic. In this more teacher-centred teaching, pupils can be unwilling to display their learning problems. Qvortrup (2020) raises the issue of pupils' possibility to mirror themselves in relation to a school community in traditional teaching. This is seen as a strengthening aspect of special importance for pupils who have lower self-esteem (see also Di Pietro et al., 2020). However, teachers' limited insight into pupils' work can also have consequences for high-performing pupils (Lasten ja Nuorten Säätiö, 2020; OAJ, 2020). In summary, online teaching changes the conditions for teachers' ability to have control over the students, which means that new teaching methods are required (Mäkelä et al., 2020).

There are however also reports about positive changes for pupils in online teaching. According to Bubb and Jones (2020), Norwegian pupils in years 5–9 experienced more creative learning, better progress, more useful feedback, and greater pupil independence during the lockdown. Mäkelä et al. (2020) show similar results in a literature review: More flexibility in teaching and learning schedules, and better possibilities for educators to motivate, advise, provide instruction, and orient learners are identified as opportunities in online teaching. According to the study, online teaching promotes teachers to take learners' skills, pace, specific needs, preferences, and personalities into account. In addition, access to a wide variety of learning materials, resources, and tools is a positive aspect of online teaching. For autonomous pupils with good literacy and time-management skills, online teaching might even lead to improvements in learning outcomes (*ibid.*). Moreover, pupils with concentration difficulties or school anxiety, or highly sensitive persons, can have positive experiences of online teaching, according to teachers in a national Finnish survey (OAJ, 2020).

To conclude, moving teaching online disturbs the existing structures and routines of traditional school, and pupils' rights to equal opportunities must be taken into new consideration (Andrew et al., 2020; Goman et al., 2021; Green, 2020). Access to digital devices and Internet, equal opportunities for

interaction with the content, teacher, and other learners, and obtaining support during the learning process are crucial aspects to consider (Martin, Polly and Ritzhaupt, 2020). Autonomous pupils might benefit from online teaching (Mäkelä et al., 2020), but pupils with insufficient skills for online learning or self-regulation, pupils with insufficient motivation, low-achieving pupils (Maelan et al., 2021), pupils with weak digital skills (Fraillon et al., 2019), L2-pupils, and pupils lacking supportive home learning environments (Andrew et al., 2020; Barko-Alva et al., 2020; Karvi, 2020a; Di Pietro et al., 2020; Qvortrup, 2020) form a vulnerable group.

The lockdown situation, in many ways, brought matters to a peak and revealed the complexity of online teaching. A common concern is the school's mission to offer equal learning opportunities. For the time being, most studies about the theme with a teacher perspective build on surveys. Hence, this interview study, where we combine analyses of issues of equity recognised by the teachers and analyses of the actions the teachers took that promoted equity, fills a gap in COVID-19 studies. In addition, the study is accomplished in a Nordic educational context, known for emphasising aspects of equity.

## **Method**

Against this background, the aim of this study is to explore teacher perspectives on issues of equity for pupils in online teaching during lockdown in the very first period of COVID-19. The study is guided by two research questions:

1. What issues of equity for pupils were affected during online teaching?
2. What steps of action did teachers take that promoted equity in teaching?

In order to gain teachers' perspectives on experiences of online teaching during the lockdown of schools, data was collected through semi-structured recorded online video interviews (each lasting approximately one hour) with twelve teachers in years 5–9, in six Swedish-medium schools in Finland. The interview guide had a broader focus that touched upon different topics of online teaching. This means that in the analyses we have concentrated on identified sequences where the issue of equity was discussed. When selecting the teachers, their interest in digitalisation in teaching was a criterion for participating. Some of the interviews were conducted within the Connected Classroom Nordic Study research project, with a focus on digitalised classrooms (QUINT, 2020a; see also Nilsberth et al., 2021b); for the selection of the other participants snowball sampling was used. Hence, these teachers are in the forefront of the digital teaching. A consequence of this might be that the results are more positive when it comes to the teachers' experiences of online teaching. The broad interview guide enables extensive analyses but the focus in the study reported here is on equity.

Two of the interviewed teachers were primary school teachers (Prim). The others were subject teachers, two teaching Swedish and Literature (L1), two Mathematics and Science (MaSc), two Swedish as a second language (L2), two History and Social Science (HiSo), and one Religion and Secular ethics (ReSe). The interviews were conducted by one of the researchers between 15 April and 8 June 2020.



After interviewing, a clean verbatim transcription was made of the audio files by a professional transcriber, who also anonymised the transcripts by changing all names of persons and schools mentioned and giving the teachers codes. This means that only the author who conducted the interviews knew the identity (and gender) of the teachers, which we consider to be an ethical strength. The quotes used in the article are translated verbatim from Swedish. Translating oral speech is about representation and power, which means that researchers have a responsibility that cannot be completely left to an outside translator (Temple and Young, 2004). In our process, a research assistant made the translations, after which we reviewed them, before they were finally checked by a language reviewer.

The data was analysed using qualitative content analysis methods, meaning that relevant expressions from the transcripts were identified (Miles, Huberman and Saldaña, 2014). In the first step, the transcriptions were read by all three researchers to familiarise themselves with the material. After several encounters with the data, in an abductive process were different coding trails were tried out in relation to the research questions, a coding frame was developed guided by the concepts of Maiztegui-Oñate and Santibáñez-Gruber (2008). In relation to our research questions two of the levels were found relevant: 1. Equity of access to school, in terms of all pupils' opportunities to learn and 2. Equity of treatment, in terms of teachers' action that promoted equity related to the themes identified under the first level. Thus, the process as a whole was abductive. Under the first level, "access to school" we found for example the issue changed forms for interaction. As the teachers in the interview commented on equity issues, the same topics arose also on the second level, equity of treatment, by us discussed as teachers' actions that promoted equity.

The principles of horizontal and vertical equity and equal educational opportunity (Maiztegui-Oñate and Santibáñez-Gruber, 2008) are used as structuring concepts in the discussion.

## **Results**

The backdrop to this study concerns the notion of access to school (Maiztegui-Oñate and Santibáñez-Gruber, 2012, 2008). In some of the schools studied, in March 2020, the pupils already had personal computers, provided by the school. In other schools, the possibility to borrow a computer from the school was quickly organised. Some pupils used their own devices. Even during the period of online teaching, some schools offered possibilities for pupils with special needs to do their online studies in the school with help from learning assistants. All teachers in the study reported that they had readiness for online teaching through their prior experience of using learning platforms and programs. The biggest change was that they began to use programs for video conferences, a process seen as technically quite uncomplicated. Despite this good baseline that guaranteed all pupils access to schooling during the period of online teaching, we found issues connected to equity that arose in the analytic reading of the interviews – issues that the teachers mentioned, that we considered was of importance for the research questions. These were related to new forms of interaction, an increased amount of text, and lack of structures. The result section follows the research questions.



## Issues of equity during online teaching, threatening the pupils' access to school

### *Changed conditions for interaction*

As stated, the changed conditions for interaction brought on by online teaching, mediated by digital devices with video, was raised as a significant factor in relation to pupils' equity. One of the most prominent changes all teachers mentioned is the impossibility to see the whole class. The interaction was limited to listening heads, distributed online or through symbolic squares in the video conference program. In online teaching it was impossible to scan over the class – the salient element of teachers' "reading" pupils' body language was lost. In this setting, it was seen as a problem to get pupils to interact. According to teachers, lecturing was not desirable, even if it could be understood as equal. One teacher reflected:

Giving pupils equal teaching becomes natural, I mean if you see it as a lecture digitally, then you give, so to speak, but then it becomes teacher-led and teachers should give knowledge to the pupil, and it maybe isn't optimal or ideal, with the new curriculum and such in mind, but it is this exchange of thoughts and this maieutic [Socratic] dialogue, that perhaps breeds knowledge in pupils, that suffers. (ReSe)

Also, when it comes to learning in traditional classroom interactions, the pupils can get help from each other just by following the discussion. This social dimension of participating in the teaching became restricted online:

I wonder if it has anything to do with the fact that the pupils can't see each other's body language, so they have a kind of a waiting attitude to be able to see "Where is the discussion going?" (ReSe)

Another consequence of teachers and pupils not seeing each other was that teachers could not encourage pupils who needed support with their motivation in the same way as in the physical classroom, especially when the pupils were not active in the video meetings. Taking initiative and orally participating in the classroom dialogue could be more exposing for pupils, making it particularly challenging for those who were not socially strong. According to the teachers, the pupils who were normally the most socially active were the ones who tended to participate in online interaction:

Because the weak pupils are never the ones that ask. It is the average pupils, the strong pupils, that ask. The weak don't... there are individual weak pupils that dare ask, they never really have a good sense of self and the self-image cracks, so they don't dare to ask either. (HiSo)

Encouraging pupils and identifying their need for support was obstructed when the teacher could not scan the class. Therefore, the teachers saw there was a group of pupils who needed help but lacked the social capacity to ask for it.

The online classroom with pupils hidden behind screens and closed cameras also affected the framework for their contact with the special education teacher, who collaborated with subject teachers and sometimes met the pupils in smaller groups. But even in small groups the interaction was difficult. The frameworks and conditions related to responsibility and expected activity moved. Like the special education teacher, the L2 teacher also normally collaborated regularly with subject teachers. The new

situation challenged their need to continuously keep up with what is being taught, something that normally happened during breaks and spontaneous physical meetings:

It is hard for me from a distance if I have a pupil that is weak in many subjects, and then I'm supposed to help [...] In the worst case, I can sit with a pupil for a whole lesson and help with something, only to find out in the end that it wasn't at all what we were supposed to do. (L2)

#### *Increased amount of texts*

The second issue connected to equity identified in the material are the consequences of the increased amount of texts. With more texts, reading and writing gain a more prominent role. Written instructions became more important, and many teachers were well aware of the difficulties some pupils faced reading written text. This particularly affected pupils with reading and writing difficulties, but also those with other language backgrounds:

It is hard when everything had to be in written form, that everything should be explained in writing. It is something that is... Well, first I thought that this will be a total disaster for my pupils. They don't understand, it won't work. But then in the end, it's been pretty OK. (L2)

#### *Lack of structures*

Issues related to structures also concerned the interviewed teachers. School is normally built on robust structures of schedules for lessons and breaks, and subject-specific structures on how lessons are implemented. In addition, the teacher's presence is part of the normal school culture.

The purpose of these typical school structures is to guarantee pupils equal access to education. The school strives to be a socially safe and organised space, where support is put in for the pupils who need it – a prominent aspect in the Finnish core curriculum (FNAE, 2014). Teachers worried about those who strongly benefit from these structures, which disappeared or were transformed in online teaching:

...pupils who may have executive difficulties, who have difficulty getting started with tasks, who have a harder time structuring their everyday lives, and now through this we put even more responsibility on the students to take care of their own schooling, then it becomes even more difficult for that type of pupil [...] if they have a hard time normally when they have extra resources around them: you may have an assistant who can sit down with you and lead you on the right path, and you have a teacher who can [...] give guidance. So, if you under normal circumstances and with those tools still have a hard time, when you are then deprived of all that help and all that support and have to manage it all alone [...] then it becomes much more challenging. (ReSc)

Furthermore, the pupils' ability to set boundaries was mentioned by the teachers. The need for boundaries was related to both schoolwork and time spent in front of the computer.

When they don't have that same kind of exchange of thoughts with the teacher in everyday life then they have a harder time valuing the amount of work expected of them, [...] some very high-achieving pupils have worked themselves into the wall, basically. (ReSc)

In some cases, strong home support could compensate for the lack of normal school structures, and pupils who were perceived as "weak" could perform well in online teaching. However, according to teachers, online teaching entails a risk for pupils from homes where digital competence was weak

and/or routines and boundaries were unclear. In addition to insufficient digital competences and weak boundaries and structures at home, language could also undermine equity, as expressed by an L2 teacher:

That's why they are in a worse position, these L2 pupils. Because the parents don't know Swedish, most of the time. It is really hard for them if they get an assignment they don't understand. Or they can't express it like they want to, who are they gonna ask? (L2)

In summary, during the very first time of the pandemic new demands concerning interaction, more written texts, and changes in structures were identified and affected pupils' equal access to school and learning. With the second research question we examined what kind of steps of action the teachers took that promoted equity for pupils.

### **Action teachers took that promoted equity in treatment**

When teaching online, the teachers worried about losing control and missing noticing pupils' needs for support and help. But at the same time, it seemed like online teaching both offered new opportunities for differentiation and imposed differentiation. It provided a chance to work with pupils at different levels in terms of both content and time:

But for some pupils I've differentiated even more than I would have differentiated in school. Like I have, to some pupils that I know that abstract things like exponentiation, so there I've given other assignments to some pupils instead [...] like in school, I would have helped them to progress but in this situation I haven't as much, "it's more meaningful that you calculate instead, like repeat the percentage calculations". (MaSc)

### *Changed conditions for interaction and teachers' action*

The transformed conditions for interaction challenged teachers to encourage pupils to participate in dialogic teaching. This means that, when the teacher's possibilities to infer and encourage dialogue were limited, the demands on pupils' personal capacities, such as self-efficacy, became crucial.

As mentioned, the consequence of the changed classroom interaction for the pupils was a central teacher experience. The teachers recognised the raised demands that this caused, especially for some groups of pupils. In order to organise as good teaching as possible for all pupils, the following topics were emphasised in relation to interaction: keeping contact with pupils, using digital affordances, giving clear instructions, and giving more and more rapid written feedback.

Keeping in contact with pupils and monitoring their learning seemed to be a central challenge for teachers who in normal conditions interacted with their pupils in physical classrooms where they could see and notice signs of pupils' achievement or need. Now they compensated for this contact by using different channels for engaging pupils and helping them during teaching. To reach everyone, especially those they felt needed most support, they utilised everything they had at hand, such as chat, telephone and the digital pupil management system (in the schools called Wilma):

There can never be too much contact, you might need to take to Wilma, you need to take to chat and you need to take to a phone call but you have to weave them into a web of contact. (L1)

This L1 teacher used the metaphor of “weaving” to describe her efforts to keep in contact with the pupils. But during lesson time teachers also experienced problems activating the pupils. Offering the chat function opened possibilities for more pupils to attend. Chatting is fast, familiar to pupils, requires only little writing, and can be informal. Teachers seemed to be positively surprised by the activity the chat aroused in some pupils. Features like chat prompted using the affordance in an intended way. One class teacher was surprised:

We also use Google Hangouts ... We can either chat that way if there is something you can easily answer, or they write according to our mutual agreement, “call me”. And then I'll take a video call on Hangouts. And then they get private guidance, and then we know nobody is listening. (Prim)

Chat is a digital affordance that makes it possible for teachers to be in contact with an individual pupil without the others noticing. A pupil who in the normal classroom situation could experience having the teacher's help being mocked may have appreciated individual contact during online lessons, and the teacher may have enjoyed being able to help an individual pupil without being interrupted or disturbed by other classroom activities.

Digital group work tools provided affordances by enhancing undisturbed work and after-school collaboration for pupils. Dividing pupils into smaller online groups to stimulate their communication was also tried by teachers but did not always turn out as expected. In attempts to compensate for the social environment in school, some teachers let the pupils work in pairs, to create a more social learning environment.

In the attempt to see everyone, written feedback was seen as a good way to give everybody some teacher attention. Individual responses increased, and feedback meant more targeted support for individual pupils. Teachers talked about a more systematic and more rapid response. In online teaching it seemed easier to keep track of who or which groups had received feedback and guidance, which teachers saw as a valuable form of keeping control over pupils' learning progress.

#### *Increased amount of texts and teachers' action*

The increase in the amount of the text in online teaching raised worry among teachers. Among these texts are the instructions needed when the pupils work more independently. To understand and interpret these meant greater responsibility for the pupil. Many teachers reflected on how to give these instructions as clearly as possible; they formulated instructions in several steps and supplemented written instructions with oral ones, aware of the difficulties some pupils faced reading written text. One teacher talked about “stepwise instruction”, which helped pupils to see the assignment as a process. The teachers themselves were helped by thinking in steps. One teacher talked about a pupil with challenges in writing longer texts, who managed to write a full book report on chat, by answering the teacher's short questions:

But the informal writing in chat for example has probably saved some pupils a lot and for me as a supervisor, that I maybe wouldn't have come up with this in a normal classroom situation. [...] I can write “read in your short story five minutes and then write an OK to me,” so they've done that, then I've been able to send a recording of me reading aloud there in the chat, I've been able to ask,

“Can you find a protagonist?” and then maybe they’ve been able to just write the name and then we’ve been able to keep unravelling this via that chat. (L1)

Teachers also used multimodal digital texts as alternatives to written texts: photographs were considered useful for pupils reporting their work as well as video recordings, for example of chemistry labs done at home.

#### *Lack of structures and teachers’ action*

In many of the schools, joint decisions about schedules for lesson time, as well as lunch break time, were seen to help pupils to maintain structure in their schoolwork. This was applied from day one of online teaching and was a way to prevent losing control and confusing the pupils. Furthermore, the teachers reconsidered the structures for their lessons. The form of the lessons varied among the teachers in the study, as well as how accessible they were, which means there was greater responsibility for the pupil to seek contact when needed. Another structure was consistently teacher-led lessons with structures familiar to pupils, which teachers believed could benefit less-autonomous pupils, as one of the maths teachers commented:

All in all, I followed the same content I've always followed, particularly in maths [...], I've tried to follow the same style of teaching I've normally done, mathematics can be pretty hard for a lot of pupils, and if you then digress too much and start getting too creative or coming up with too much then it might become really difficult for the weakest pupils. (MaSc)

Teachers’ awareness of the need to limit the hours spent on assignments for ambitious pupils also motivated them to keep up clear structures for school days and schoolwork.

The role of home conditions arose for many teachers. They worried about pupils from homes with domestic troubles or lonely pupils who might not have a guardian or siblings at home. This is connected to their concern about how and when to be present and equally available for all pupils:

For me it feels like an important thing that I'm there for the one who needs it right then, that it's their mental health that is at stake, so for the pupils in my own class I tend to be available actually all the time, but I always choose to answer or not, but I usually answer them, but for ordinary pupils, whoever I happen to have in a class, then I'll answer during the day when possible. (MaSc)

In this new online setting, teachers were aware that their accessibility was important to pupils, and actively reflected on different models for contact. Some were available only during lesson time, while others made themselves available during normal school hours. Some also answered the phone in the evenings, to prevent pupils’ anxiety and frustration. When teachers suspected that somebody was slipping behind, they did not hesitate to contact individual pupils.

The actions teachers took had the purpose of obtaining control over the teaching and by that, ensuring equal opportunities for all pupils to participate in their schoolwork and progress in their learning.

## **Discussion**

The discussion is structured around the principles of equity: horizontal equity, vertical equity and equal educational opportunities, according to the theoretical basis of the article.

During the pandemic, the conditions for equal education were challenged. Access to school is a central dimension of equity, and mainly the responsibility of school managers and educational authorities. Schedules, routines for synchronised and asynchronised teaching, access to computers, software, and pupil management systems constitute a base for online education. It is comforting that all the twelve interviewed teachers stated that access to digital resources did not pose a problem and only a few pupils had difficulties in relation to devices and utilising affordances. This is a sign that horizontal equity, understood as equal treatment of individuals in the same situation, was guaranteed (Maiztegui-Oñate and Santibáñez-Gruber, 2012, 2008). These results differ from the Finnish surveys (Invest, 2020; Karvi, 2020a, 2020b; OAJ, 2020) where challenges related to digital resources for some pupils are identified in some Finnish schools.

Even though the base for online teaching, from a horizontal equity perspective, seems to be stable, equity issues remained unresolved. Issues that the interviewed teachers worried about concerned different groups of pupils, e.g., those who are disadvantaged in some ways but also those who are overambitious. Teachers are usually in control, and suddenly, they are not. They might not see where they need to intervene, as pupils needing help are not always visible in a setting with closed cameras and microphones. To reach equity, some pupils needed more attention than others, which is an expression of the vertical principle of equity, understood as recognising that pupils have different starting points. Some pupils need to be equipped with more resources for horizontal equity to be achieved (Maiztegui-Oñate and Santibáñez-Gruber, 2012, 2008).

The results in this study show that issues concerning equity for pupils, identified by teachers during lockdown in the very first period of COVID-19, were related to changes in interaction, an increased amount of texts and lack of structures. The teachers noticed challenges in the new online school – and they took steps of action that promoted equity in teaching.

When teachers and pupils were not in constant visual and aural interaction with each other, teachers were faced with new situations in terms of opportunities and needs to consider pupils equally. They were aware of the importance of the social context and interaction for learning to happen. This can be seen in the teachers' strong attempts to keep in contact with their pupils. Hence, the notions of communication and interaction were repeatedly emphasised by the teachers in this study. A situation where teachers can no longer 'read' the group, or easily move around the class, is a vigorous change in relation to normal circumstances. Teachers reported on a range of methods to keep in contact with their pupils and keep them communicating with each other, a consequence of the limited interaction noticed also by Qvortrup (2020) and Nilsberth et al. (2021). In addition, teachers supported pupils' activity in online teaching by dividing them into smaller study groups, using chat functions, calling pupils, and using different digital affordances. Still, a greater load of responsibility to ask for help fell on the pupils. These results are important in relation to earlier studies showing that socially more cautious pupils may be left out during online teaching (Martin, Polly and Ritzhaupt, 2020) whereas autonomous pupils with self-management skills have an advantage (di Pietro et al., 2020; Mælan et al., 2021; Mäkelä et al., 2020; OAJ, 2020; QUINT, 2020b).

The increased amount of texts also raised worries among the interviewed teachers. In online teaching, pupils with reading and writing difficulties end up in a vulnerable position, but teachers were conscious of this and made efforts to offer pupils instructions in different modes. They also provided opportunities for pupils to represent their learning and understanding in multimodal forms, which can support pupils with reading and writing difficulties. The use of digital affordances gave pupils access to a wide variety of materials and tools. All in all, the analysis shows that teachers' efforts were manifested in forms of differentiation – it seems to be easier to offer pupils a variety of ways to do their schoolwork when using ICT in teaching. These results are in line with Mäkelä et al. (2020), who point out that one benefit of this way of using ICT is that pupils' preferences and personalities can be better considered, and with notions about flexibility as a feature experienced in online teaching (Bubb and Jones, 2020).

The third issue regards teachers' concern about the consequences of the lack of structures. The teachers worried about pupils from homes where digital competence and boundaries were weak, and pupils with parents with weak competences in the language of instruction. The teachers' concerns are echoed by earlier studies that identify issues about language, socio-economic status, ICT access, and ICT competence as related to pupils' learning during the lockdown (Andrew et al., 2020; Doyle, 2020; Di Pietro et al., 2020; QUINT, 2020b; Qvortrup, 2020). Teachers in this study were aware of the differences in pupils' homes and that these may have affected pupils' schoolwork. Teachers also recognised both high-achieving pupils who may have difficulty setting boundaries for their work and pupils who are not self-directed as vulnerable groups in relation to the lack of structures. These groups are also singled out in more comprehensive Finnish surveys (Lasten ja Nuorten Säätiö, 2020; see also OAJ, 2020; Goman et al., 2021). L2 pupils also stood out as a group who needed special attention, something also noticed in earlier studies (Barko-Alva et al., 2020; Goman et al., 2021).

In order to contribute to equity for these different groups, the teachers worked to keep structures, be clear in their instructions, and keep active contact with pupils and sometimes guardians. These are considered to be actions promoting equity in a vertical perspective. According to their professional approach, the teachers saw that the responsibility for pupils' learning lay with the school.

By critically directing resources to pupils, it is possible to give all pupils equal educational opportunities. Equal educational opportunity is the third principle of equity according to Maiztegui-Oñate and Santibáñez-Gruber (2012, 2008). Our study shows a clear awareness among teachers that online teaching requires them to take action to ensure that, under the new conditions set by the pandemic, all pupils have access to school and by that opportunities to learn. Through this, they were working from a perspective of vertical equity towards equal educational opportunities. Teachers act in their own context, the school they work in, and with the pupils they are responsible for in their teaching. As teaching moved online, after a minimal amount of time for preparation, basic agreements and frameworks were made in schools; in some schools it could be a matter of sticking to the schedule, in others to prioritise a particular learning platform. It was seen as important to reach all pupils, and schools created systems for the schools' multi-professional team to handle if there was a risk of pupils dropping out.



Our analyses of the interviews show strong teacher autonomy. Teachers had the space to independently create and maintain teaching during these exceptional times. We can see a confidence in and expressions of professionalism among the teachers. Strong autonomy is a typical teacher characteristic in Finland, as in all Nordic countries (Sahlberg, 2011; Toom and Husu, 2012). The research-based teacher education in Finland, which has been at university level for almost 50 years, strives to give teachers the readiness to act professionally, leaning on strong pedagogical knowledge (Kansanen, 2013). These abilities have been put to the test during online teaching.

During online teaching, digital resources were generally of great importance. From a horizontal equity perspective, this means both access to equipment and competence to use these. The study shows that teachers, as early as in the first stages of online teaching, were trying out digital affordances as tools to support certain pupils to participate in the teaching. By that they emphasised the importance of pupils' access to learning. For example, they used the chat function to clarify the instructions for pupils who needed it, they called individual pupils when they feared that they needed extra support, and they took multimodal digital texts into teaching to a greater extent than usual. We understand all this as expressions of working with vertical equity, which in the long term leads to equal opportunities for education. We interpret the digital competence of the interviewed teachers as sufficient, and above all that the teachers expressed interest and creativity in the digital field.

The consequences of the changed interaction were a recurring theme in teachers' experiences. The fact that the teachers often highlighted limitations and challenges related to the new forms of communication is an indication that interaction with pupils is an important starting point in teachers' theory of practice. The "normal" seems to be to work dialogically, where the teacher gives space for pupils' contributions and notices when they need extra support, a feature noticed in other Nordic studies (Nilsberth et al., 2021b; Nilsberth et al., 2021a). In a Finnish perspective, we additionally draw parallels to studies of the PISA results, which often highlight the importance of lifting weaker pupils as a distinctive feature of Finnish schools (OECD, 2019).

## **Conclusions**

Equity is a part of schools' mission, stressing all pupils' equal opportunities to learn, a value traditionally common to Nordic countries (Klette, 2018; Lundahl, 2016; Nilsberth et al., 2021; Zilliacus et al., 2017). Issues of equity were perceived as a particularly central topic of online teaching by the teachers interviewed in this study. A striking result was the notion of the new conditions for interaction as a factor that challenges equal educational opportunities. The fact that interaction was given such a large role shows its great importance in the teaching profession.

In order to make interaction work within the new context, teachers developed various pedagogical solutions and strategies to increase equity among pupils. A pedagogical implication of the study is the need to develop models to support teachers in the areas of interaction, instruction, differentiation, feedback, and specially in relation to the use of digital affordances – which requires readiness, at a educational policy level, to offer resources to in-service training. Such models could promote equal

educational opportunities for all pupils in online teaching and thus contribute to a higher degree of preparedness for similar situations in the future.

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