PROBLEMS AND OBSTACLES OF DISTANCE LEARNING IN THE POINT OF VIEW OF PRIMARY SCHOOL TEACHERS IN THE "COVID PERIOD"

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ABSTRACT

The COVID-19 pandemic period confronted schools with new challenges related to school closures and the transition to distance learning, which brought with it several problems and obstacles that schools had to overcome. The main objective of our study is to qualitatively explore the problems and obstacles of distance learning at the first level of primary schools. We were based first on a document of the Czech School Inspectorate and their evaluation of distance learning and other foreign publications dealing with obstacles in distance learning. Based on a qualitative survey based on eight semi-structured interviews, we sought an answer to the research question: "What problems do teachers perceive in the implementation of distance learning?". The analysis of the interviews identified three basic categories; 1) Technical problems; 2) Socialization; 3) Widening the gap; We elaborated these three categories in detail in the results section and illustrated with authentic statements of respondents. As an overarching topic that was intertwined with all the interviews, we identified the issue of teaching effectiveness, which was the actual goal in overcoming the identified obstacles.

KEYWORDS

Distance Education (Distance Learning), Efficiency of Learning and Education, Teacher and Pupils of Primary School, Primary School, COVID-19 Pandemic, Czech School Inspectorate

1. INTRODUCTION

Distance learning is a form of teaching that has been the subject of research for recent years. At the same time as this boom, the advantages and disadvantages of distance learning are more obvious, across all levels of education according to ISCED. The main objective of our study is to qualitatively explore the problems and obstacles of distance learning at the first level of primary schools (ISCED 1, the first level of primary schools includes school attendance from 6 to 10 years of age).

We are based on published documents of the Czech School Inspectorate (ČŠI, 2020),which comments on the findings from questionnaires commissioned as part of full-time inspection activities during the month of September and the first half of October 2020, which was attended by 1,767 pupils and 602 teachers from a total of 66 primary schools located in different regions of the Czech Republic. Focusing on the shortcomings of distance learning, the most important factor was the absence of social personal contacts with classmates, which was expressed by 55 % of respondents. A worrying result was that 16 % of 1st grade respondents declared that they had no online teaching and did not take place at all. From the point of view of grade 1 teachers, obstacles were cited such as a reduction in the successful performance of the role of class teacher at the time of distance learning, content reduction (although surprisingly low, only 17 %), the lack of quality digital technology, (38 % of teachers) and the lack of training of teaching staff to work with digital technologies (42 % of teachers). (Pavlas, Zatloukal, Andrys, Pražáková and Šlajchová, 2020).

Available foreign studies dealing with obstacles to distance learning report problems with IT infrastructure, internet availability and frequent outages (Utomo et al., 2020). The Zan et al. study (2020) found that 61 % of students were unable to participate actively in distance learning courses due to computer or tablet problems, and 40.3 % had internet connectivity problems. The advantages were characterized by technological

difficulties, cultural and regional differences, evaluation and scoring, unplanned shifting of hours, the problem of discipline and the inability to focus on the problem. (Zan et al., 2020). Constructive feedback from the teachers (Tsodikova et al., 2020) is an important factor in alleviating the shortcomings of distance learning. Nenko (2020) points to the lack of qualifications of some teachers, conservatism, psychological barriers and unpreparedness for online education. It also underlines the rigidity towards the innovation, the low incentive level for the development of distance learning courses, technological inadequacy of teachers, excessive bureaucracy of distance learning, passive access by teachers to applications on the Internet, low awareness of distance learning opportunities and a lack of adequate technical equipment and internet access for students living in rural areas.

The effectiveness was a central identified topic, which in a way contains all the texts (Veteška et al., 2020). It includes, on the one hand, a view of effectiveness by the teacher (e.g. Wilson and VanBerschot, 2014, Jurkowski and Müller, 2018, Neifeald and Nissim, 2019, Rabin, 2020) as well as a student view (e.g. Puttonen, 2014, Strogilos, King-Sears, 2019). The view of effectiveness by teachers is usually the basis for revision of the methods used or modification of a course. Based on a pilot study, the teachers reflect the entire teaching process, finding the positives and negatives on which it is based when adjusting the course or educational activity to its final form (Kim et al., 2007, Wilson and VanBerschot, 2014, Neifeald and Nissim, 2019).

Problems and prospects for improving distance learning are being explored around the world. It is clear that the development of distance learning for both students and teachers requires adjusting some aspects of its implementation in order to meet the needs of the educational process and to increase the effectiveness and educational process of this unexplored form of teaching. We agree with the statement of Kryshtanovych et al. (2020) that each and the analysis of accumulated experience of teachers from different disciplines, summarizing the results of pedagogical, didactic and methodological problems and their context, will significantly contribute to the future improvement of the quality of distance learning. We join with our qualitative study, which summarizes obstacles and problems in distance learning based on controlled interviews with teachers of the 1st grade.

2. BODY OF PAPER

2.1 Methods

An exploratory and descriptive qualitative approach was chosen. The goal of qualitative description research is to provide a rich description of the experience displayed in an easy-to-understand language. The authors try to discover and understand the phenomenon, process, perspectives and opinions of the people involved. A qualitative descriptive approach offers an opportunity to collect authentic descriptions of a phenomenon little is known about. As part of the process, the researcher tries to stay close to the "surface of data and events", where the experience is described from the perspective of participants (Bradshaw et al., 2017). Research of this type focuses on authentic "what", "who", "where" and "why" experienced events or experiences (Neergaard et al., 2009). Qualitative descriptive approach does not require highly abstract data rendering compared to other qualitative designs (Lambert & Lambert, 2012), but of course some interpretation logically occurs (Sandelowski, 2000, Bradshaw et al., 2017). The data was collected in an authentic first-grade elementary school[1] environment (i.e. ISCED 1 education period) in autumn 2020 (September-November) using semi-structured interviews and analysed using content analysis.

[1] This is an elementary school that is involved in the TAČR project. The aim of the scoping review is to analyze and summarize the most important knowledge on selected topics of co-teaching as a starting point for further research work within the Project Technology Agency of the Czech Republic (TAČR: TL03000133) entitled *New Method of Education for the 21st Century: Virtual-Co-Teaching* solved in the 2020-2023.

2.2 Participants

A total of 8 semi-structured interviews were conducted with first-grade teachers (ISCED 1) at the school involved in the TAČR project. The criterion for inclusion in the study was essential: teaching only in the ISCED 1 period in the Czech Republic (i.e. pupils up to the age of 10 years), active use of distance learning tools and experience with distance learning already from the period of the first lockdown (spring 2020). Participants in the study were recommended by the school head based on this criterion. Teachers of different subjects (English, German language, main subjects, subjects of educational orientation) were selected, these were only women, given that no man works as a teacher in the school.

2.3 Data Collection

The data was collected using semi-structured interviews conducted during autumn 2020 (i.e. during the second school closure period), it was recorded, repeatedly listened to and the main parts were written down. In view of the restrictions associated with the Covid-19 pandemic, the conversations were conducted in a virtual environment (hangouts meet, phone, facetime). The talks lasted between 20-30 minutes. At the beginning, all participants were asked the introductory question: "What problems do you perceive in distance learning?". To understand the context communicated to them, the participants were asked even more additional questions: "Can you tell me more about what you mean? How do you feel about the situation? Do you see the difference between spring 2020 and the current situation? What does this mean for you?". The interviews were conducted by one of the authors of the study (Zuzana Svobodova).

2.4 Data Analysis

The analysis utilized inductive and deductive content analysis, as described by Graneheim, Lindgren and Lundman (2017). Content analysis is a method that is based on the analysis communicated through coding and categorization, and which is suitable for determining the opinions, ways, behaviours and experiences of individuals or groups (Mayring, 2000, Hendl, 2016). The analysis process included a series of successive steps that were regularly discussed by the research team (authors of the text). The participants' communications in the interviews were thematically broader than relevant for the research, however, only their relevant communications regarding obstacles and problems with distance learning were included in the data analysis. Interviews were repeatedly listened to by the research team (authors) in order to understand the content and to identify the obstacles and problems that respondents experience in the implementation of distance learning. The first phase of analysis was inductive. Categories and meanings related to the research question (objectives of this study) have been identified. These codes were subsequently grouped into subcategories based on significant similarities (Hendl, 2016). The next phase was deductive. Subcategories were classified under the categories identified in the previous study (Veteška et al., 2020). The subcategories and categories that emerged during the analysis are shown in Table 1.

2.5 Results

Distance learning, however challenging, allows pupils to participate in education even at the time of school closures. As we mentioned in the introduction, the level of compensation and the problems they had to overcome were different. In the autumn of 2020, schools experienced a second closure, when they switched to distance learning in the Czech Republic completely from 14.10.2020. Problems and obstacles to distance learning can be summarised under three key areas: 1) technical problems, 2) socialisation and 3) widening differences. Similar problematic categories were identified in a previous study of authors focused on co-teaching opportunities in a virtual environment (Veteška et al., 2020). The overarching term for these three categories is “education effectiveness” which should also be the same category identified for the previous study of the authors (Veteška et al., 2020). The result part is structured according to individual categories, each category being discussed from the point of view of the participants and related to the effectiveness of teaching. Participants were quoted literally to ensure their authenticity.

Table 1. Subcategories and categories

Categories	Subcategories
Technical problems	Technical problems of pupils
	Technical problems of teachers
	Cameras versus icons
Socialization	Focus on the curriculum
	Communication and relationships
Widening the gap	Children with specific educational needs
	Ability to be independent

2.5.1 Technical Problems

Initial reaction of all study participants to the introductory question asked, *"What problems do you perceive in distance learning?*" was essentially similar and involved a "*sigh*" over technical problem. Overall, they rated distance learning positively in the first place and saw it as an opportunity to educate and be with pupils even at this difficult time (*"better online than nothing*"), but immediately there were complaints about technical difficulties, which make this positive aspect difficult for them , one participant aptly remarked: *"The beginning is difficult, the children immediately report technical problems, this doesn't work, this doesn't work and before I put it together, then the hour is actually gone", "before the class starts, we say hello ten times, we have technical problems, we have 30 minutes education and during that we connect for five minutes"*.

At the same time, technical problems **make it difficult** for pupils to concentrate at the beginning of class, when teachers were able to get their attention easily during normal teaching. Now if something is not going well, which is almost always the case, the attention is immediately gone and it is difficult to get it back and the effectiveness of teaching decreases significantly: "*Children do not learn so much, I cannot expect outputs that would be from normal teaching, I am completely annoyed by it*"

Technical problems of pupils

Technical problems of pupils depend not only on technical equipment and signal quality, but above all on their age. Participants of the study perceive as a turning point the third year of basic education, i.e. age about 8-9 years, when pupils are able to independently operate platforms for distance learning and parents are not needed as technical support: *"Younger ones simply cannot put together work with a camera, shared screen, textbook and so on"*. At the same time, they perceive that when pupils are so-called on their own, they don't have parents in the same room, the lessons run better even with minor technical difficulties than when the parent is present and tries to technically help: *"I had to teach parents that they should not intervene immediately, if the child cannot mute the microphone, we would not get anywhere, I try to explain to them that they should not be at the lessons and that if I need them I will call them myself*".

Technical difficulties in first- to third-grade students stem primarily from the fact that it is first necessary to teach them how to operate the necessary equipment and operate on the platform. So the curriculum was turned back at the beginning, and the teachers preferred targeted behavioural training in a virtual environment: "*The first lessons were just about how to turn on the microphone and turn off the microphone, I did not teach anything*". They perceived the constant presence of parents in teaching as challenging: "*I am not used to being looked at all the time by a parent, I want to be alone with my pupils for a while"*.

On the other hand, younger children perceive that the presence of a parent helps to maintain the concentration of pupils: *"third-graders can technically handle something on their own, but they can't keep their attention at all, but if they have parents there, they can convince them"*. It is therefore a constant balancing act of independence, of help from parents versus the need to teach without them, of practicing the control of technology, directing and solving various small things, which is of course a great obstacle to the realization of effective teaching. One of the interviewed teachers said that it is a pity that companies did not come up with products designed specifically for teaching younger children, where the control would be adapted to their maturity: "*It's a pity that there is no laptop for the youngest, the products for seniors are, but no one is thinking about first-graders' education*".

Technical problems of teachers

The technical problems of the pupils were mainly based on the inability to control the necessary applications for distance learning, rather than on real technical problems. Teachers solve problems of different nature – they are considering how to transfer the activities they did in the classroom to the online environment, as well as

how to combine their work with family and their own children in online teaching (and their technical problems). The foreign language teacher perceives the inclusion of listening as very problematic, because it is not of enough quality to play it directly into the online lesson and the solution to this problem will take almost an entire class. So she went back to the old way of playing CDs, which leads to better quality than playing directly on the computer: "*I have a problem with listening, it takes too long to get connected and thirty minutes is a short time, then it doesn't work and the hour is ruined. So, I'd rather play it from the cassette player, not much, either, but at least something, it's a lot about improvisation"*

A big complication for teaching **is the need** to provide for their own children, the respondents consistently stated that basically their own child is directly participating in the learning, that it is really challenging, and it complicates their work significantly. At the same time, they often do not have strong enough internet connection, because the whole family is at home and online: "*home Wi-Fi does not catch up, their own child is at home learning, so it is really impossible*".

A specific technical problem is **the absence of a comprehensive concept of materials** and technical equipment that would be suitable distance learning: "*the problem is that we follow a normal textbook, and something isn't viable doing online*". Teachers need to "digitize" the materials they used in full-time teaching, which is of course time-consuming, and not always in the conditions and possible with the equipment they have: "*textbooks are not ready for it, I have to invent myself, create new digital materials and do everything again, and it is very demanding to prepare*".

Cameras versus icons

The issue of on or off cameras is actually on the border of other categories, because it is also related to the area of socialization and educational problems, however, due to the prevailing technical character, it was classified in this category and due to its overlap is described separately. The interviewed teachers made it clear that it was extremely difficult for them to teach icons and wished that pupils had their cameras turned on. On the other hand, they realize that it is necessary to share one Wi-Fi in families with more children, and the cameras turned on are, of course, more demanding on the quality of transmission. None of the respondents knew how to deal with this problem, whether to handle it with parents, with children, with other teachers, whether to proceed with sanctions, if the pupil refuses to turn on the camera or whether to accept this fact and put up with it: "*I do not know how to deal with it, they say they have a bad signal, but they say it all the time, I do not know if it is true*". At the same time, they feel that seniors may be conducting inconspicuous truancy, and children avoid teaching in this way "*especially the fourth and fifth grades, they pretend that their sound does not work, they turn off their cameras, I do not know if I should believe it*".

Teaching icons is unpleasant for teachers, they lack facial expressions, responding to pupils' expressions and overall the atmosphere of the class to which everyone was used: "*When I look at icons, I don't really know if they enjoy it, I know that maybe it does not matter, but still, when I see a face, I can react, say something differently, but I don't know how, the icon still looks the same*". One respondent said that when she started class, she always remembered the previous class, which does not work in the virtual class *"when I see them in the classroom, I remember what I actually wanted and I do not remember it online, because, as I cannot see them, I do not know"*. Another problem of teachers not seeing pupils is different screen sharing and switching to other applications, then really everyone is referred only to auditory sensations without facial expressions, *"I want to share a screen and show them something, but then I actually lose them all"*.

2.5.2 The issue of Socialization

Socialization, relationships and personal contacts are limited in all areas nowadays. Of course, human contact is essential for quality development in childhood, and socialization is an important part of school education, which is very difficult to transfer to the online environment of distance learning. It is always difficult, however with younger pupils everything is complicated by the above-mentioned technical difficulties and overall problematic control of the necessary devices. Distance learning is therefore concentrated on mastering the teaching, communication and relationships instead of complex development of the child's personality.

Focus on the curriculum

Teachers perceive that they had to reduce socialization activities for distance learning and focus essentially only on mastering the teaching. They have smaller time subsidies for online teaching, part of the curriculum is solved in the form of separate tasks and the achievement of socialization courses of education has disappeared almost completely *"it is just about discussing the curriculum, that's all we can do"*. At the same time, they

perceive that the curriculum is essentially given to children in a frontal way , and online lessons are very instructional, it is impossible to realize playful activities that were typical for the full-time form of teaching younger children: *"it is more monotonous than in full-time teaching"*, *"didactic games associated with movement cannot be replaced, it would normally help to maintain concentration and experience of the curriculum"*. It is therefore clear that children of younger school age actually experience a significant reduction in what is normally happening in schools and focusing on facts only is not appropriate for this age, and as one respondent has said, children are also "*losing their hard-earned work habits*".

Communication and relationships

All respondents consistently stated that children of younger school age lack a lot of group dynamics in teaching, lack contacts with classmates and teachers, lack friends and relationships, and none of this can be replaced by technology. They perceive that the lack of these stimuli leads to a loss of attention and reduces interest in the curriculum *"children begin to lack internal motivation"*,*" young children would need to go to school, they lack friends, the longer it lasts, the worse it gets"*. Children are also beginning to be uncertain in teaching because they lack immediate feedback from the teacher, they do not have additional visual and auditory support, and for some it is very difficult: "*there is no immediate feedback from the teacher, smiles, nod, this simply cannot be replaced by the technique*"

A specific problem in the area of communication and relations was reported by one respondent, who was taken aback by the fact how strange it is that some teachers do not want to learn to work in distance learning and boycott the whole process a little, which complicates the work in other classes and groups and disrupts the relationships in school: *"Colleagues do not want to learn anything new, this is absurd, the teacher should be the one who likes to learn when she teaches others"* and then added: *"Now it turns out that schools are backward and should, on the contrary, give direction"*.

2.5.3 Widening the Gap in Acquired Knowledge

Our respondents expressed their comments in a similar way, as also shown by the findings of the Czech School Inspectorate of the Czech Republic (ČŠI, 2020) informing about the widening differences in pupils' knowledge. They perceive different family backgrounds, different help from parents and different abilities of individual pupils. They realise that it is extremely difficult to develop all children equally in the conditions of distance learning and that the situation in individual families and their involvement in teaching is much more accentuated *"the difference between the weaker pupils and the class's best pupils is much more accentuated and you can see who is being helped at home and who is on their own"*, *"weaker pupils are less concentrated and they don't catch up with the curriculum, the best pupils overtake them"*.

Children with specific educational needs

Surprising fact for respondents was that for some children with special educational needs (SEN), is the distance learning better, however, they realize that they cannot really accurately evaluate it, but feel that they are doing better: *"some children with ADHD do not nudge themselves in the classroom and are alone, so they concentrate better, no one disturbs them"*. Unfortunately, most SEN pupils do not manage the online learning environment and there is no way to activate them properly and involve them in teaching. In the classroom and during personal contact, the teachers immediately saw when a child started to be at loss in class or did something else, during the online transmission they logically miss this *"I just do not see the children, so I do not know if they are with us or doing something else or nothing"*.

Teachers are also not sure whether the tasks are actually done by children and if they understand the teaching, or it is the work of parents and their help *"I really do not know who did the task, I never knew with homework, but the point is that a lot of the curriculum is actually homework now, so I can't be sure that the pupils can really do it and with some it is really strange"*. This is a fact that cannot be checked within the next class. According to respondents, children who are hypoactive are problematic, i.e. those who still need to be motivated and encouraged to work in class, which is not possible now: *"children who have their world and stare around, no one will adage them, no one will tell them anything, they are staring and not working, this would not happen in the classroom"*.

Ability to be independent

The development of independency logically does not happen equally for all children , and in the classroom it is easy to individually support children in this regard, in an online environment it is very difficult: *"children are not very independent and still need to make sure that they are doing something right, so they are in discomfort and someone keeps asking questions, in full-time teaching I can regulate it by gesture and not disturb others, here it is impossible"*.

Respondents clearly identified differences in pupils' ability to work on their own and adapt to new educational conditions. One of those interviewed said that this method of teaching would clearly show who has **study prerequisites** and is ripe to go into the academic educational mainstream and who does not: *"I think that in this way of teaching it will come out quickly enough, then we do not need any entrance exams, it is simply clear that who can organize a curriculum like this, is ready to study independently even in grammar school"*, *"in this way there would be no need to take entrance exams – who does independently in online, can go straight to grammar school, we could tell them straight away"*.

Regarding the **effectiveness of teaching**, as an overarching term for defined problematic areas of distance learning, there were also reflections focusing on the overall meaning of the curriculum. One respondent said that she perceived that the curriculum, as defined now, constitutes an obstacle to quality distance learning. She perceives that she is very focused on memorising facts and even the tests she uses to verify knowledge are focused on information that pupils can easily find in distance learning. She perceives that she is therefore in the stage of thinking about the meaningfulness of what he teaches and does not really know what to do with it: *"We are referring to the problem of pedagogy itself – whether the pedagogy is supposed to be, that children should have fun or biff something, I really do not know, for example, in the language, words have to be biffed, they can look it up elsewhere, but then they are unable to use it"*.

3. CONCLUSION

Distance learning is an opportunity not to interrupt the education process at the time of school closures, but its implementation faces a number of problems. This study gives an overview of these problems and experiences by looking at eight teachers of the first level of primary school in the Czech Republic. Inductive and deductive content analysis identified three main categories that were continuously related to the question of teaching effectiveness.

The results of this study show that the area of technical problems is not only based on the technical equipment of schools and families, but also relates to other aspects – such as maturity and age of pupils, family situation during lessons and overall personal settings and willingness to learn something new. The study reaffirmed that personal contacts and standard full-time teaching are irreplaceable for this age group of pupils and its absence leads to a further widening of the gap between pupils and complicates the already demanding education of children with special educational needs.

A deeper understanding of the needs of teachers and pupils, which would lead to overcoming some of the identified obstacles, would be appropriate to carry out further research investigations and to rely on more qualitative data to lead us to a clearer understanding of the issues pursued – i.e. the effective implementation of distance learning.

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