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## CHAPTER 27

### DISTANCE LEARNING: IMMEDIATE PROBLEMS AND LONG-TERM CONSEQUENCES

**Abstract:** The purpose of the proposed work is to trace the introduction and implementation of distance learning in schools, imposed due to the restrictive measures to limit the spread of COVID-19, to identify the problems and consequences of this form of educational process. Attention is paid both to the immediate ones - concerning the scope of children in the education system and the quality and results of the training, as well as to the long-term ones, which will have their projections further in time. Special attention is paid to the specific problems accompanying the education of children from vulnerable groups.

For this purpose, official documents and statistical information were analyzed and interviews were conducted with experts from the field of education. A secondary analysis of available empirical surveys was also carried out. Based on an analysis of the extensive information used, the main negative consequences of distance learning are outlined: caused mostly by the various aspects of digital inequality, a narrowing of the range of learners, which, even after the return to face-to-face learning, does not reach pre-epidemic levels; reducing the quality of education; deterioration of its results.

As additional negative consequences, the negative impact on children's health and psyche, on their socialization and communication skills is outlined. At the same time, effects with the potential for a long-term negative influence and forward in time are also identified, which requires management decisions to be made for their neutralization or at least minimization.

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The conclusion is that distance learning cannot be a substitute for face-to-face learning, but only its addition.

Keywords: *education, distance learning, digital inequality, vulnerable groups, socialization.*

## INTRODUCTION

At the beginning of 2020, the world found itself in an unexpected and completely unique situation. A lightning-fast spread of a previously unknown virus - COVID-19 - began. In conditions of high population mobility, it quickly crossed national and continental borders, spread throughout the world and grew into a pandemic.

At the beginning of March 2020, the virus was also detected in Bulgaria. And while at the beginning its distribution was clustered, at the end of October an extremely strong diffuse growth of the infected was registered. Respectively, the number of those hospitalized and those in need of intensive care also increased a lot. To limit the spread of the virus, restrictive measures were introduced that paralyzed or at least severely altered all activities. As in other countries, in Bulgaria the whole public life was shaken. Educational activities had to undergo a drastic change, which inevitably gave rise to problems and generated a number of consequences.

The analysis offered here has as its information base statistical data, official documents, expert assessments, results of conducted empirical surveys: “Impacts of the COVID-19 pandemic on preschool and school education - the point of view of specialists working in regional departments of education (RDEs)”, carried out in the period May-June 2020 through the method of an online survey with 52 experts from all RDEs in the country. two surveys by the Amalipe Center, conducted in the first week of the introduction of the state of emergency in March 2020 and at the end of June of the same year, covering 150 schools from all over the country with an increased representation of children from the Roma community. Both surveys were conducted via an internet-based inquiry.

## DISTANCE LEARNING - PRACTICES AND PROBLEMS

With the emerging impossibility of conducting face-to-face learning activities, with an amendment to the Preschool and School Education Act, a completely different form of education was provided for - „learning, as well as support for personal development at a distance in an electronic environment by using the means of information and communication technologies” (State Gazette No. 82/

18.09.2020). Already in the spring of 2020 and from November of the same year, the training became distance. Later, at the end of January and in February of the following year, face-to-face training for some age groups and educational activities began to return in different variants and scales.

In Bulgaria, the introduction of restrictive measures to limit the spread of COVID-19 took place after two extraordinary school holidays due to a significant spread of flu, and attention was already focused on learning and the need to catch up on missed material and continue the educational process in such situations. The Ministry of Education and Science (MES) was already considering how to take material missed due to flu holidays remotely.

Initially, with the uncertainty about the duration of the restrictive measures, the goal of the transition to distance learning was to minimize the loss of learning material and to use the time when students were out of the classroom for practice and assimilate of the material. The two main forms of distance learning offered were the virtual classroom and student assignment and self-study. Schools that initially or at a later stage could not join the process of distance learning through the educational platforms were oriented towards other alternatives. There, students received instructions on what to work on at home on paper.

According to information from the regional departments of education, practically all schools provided continuation of the learning process in some remote form. Most often, this happened by choosing one or other forms or a combination of forms corresponding to the specifics of the region, the school, the students and their families. The forms of distance learning used were: online learning in real time; e-mail training; putting students on different tasks, but not in real time; delivery by teachers and educational mediators of training materials to children's homes. The most commonly used forms of learning in an electronic environment were live online lessons on platforms such as zoom, teams, google classroom, moodle, etc. In fact, distance learning is implemented at several speeds: some students participated in on-line lessons and/or other forms of Internet-based learning, others were reached only by educational mediators who distributed printed lessons and tasks, and others remained passive.

A favorable circumstance is that in Bulgaria there are already developed on-line materials, many of which are free, e.g. at Khan Academy. Also, the national radio and television have their experience in supporting the school educational process. It is obvious, however, that the public media cannot be of full value in education, since with them the process is one-way, without feedback, without connection with the teacher and the child's learning environment, and in this sense they are not comparable to educational materials and tools for learning on the internet.

## PROBLEMS

In the course of distance learning, a wide range of problems related to the material and technical means, the participants in the educational process, the methods, the organization, etc. are manifested (Mantarova 2021).

A barrier to engaging in learning in an electronic environment is the lack of the necessary devices. Given that, according to information from the National Statistical Institute, approximately 30% of children live in poverty, it is obvious that there is a significant number of children who do not have the necessary device. According to the then Minister of Education and Science Krasimir Valchev, in the spring of 2021 such were 37 thousand children, and autumn - 30 thousand. The problem is particularly acute for vulnerable groups, for whom the lack of suitable devices is an insurmountable barrier.

And in the course of the survey among experts from RDE, more than a third (39.5%) of them point to this as the main reason for the lack of distance learning in some of the schools in their regions (Fig. 1).

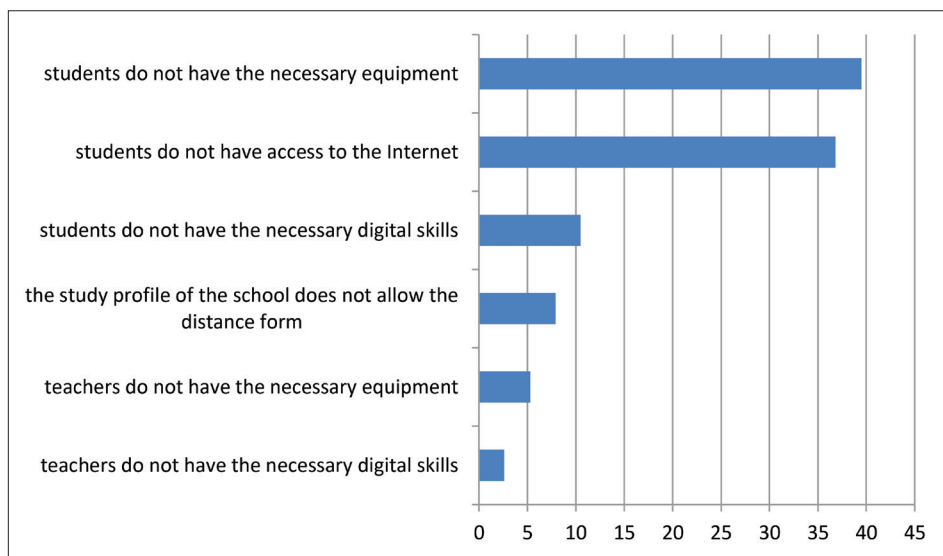


Figure 1. Reasons for not providing distance education in any of the schools in the district

Source: Study “Impacts of the COVID-19 Pandemic on Pre-school and School Education – Standpoint of Specialists Working in RDEs”

The results of the Amalipe Center survey in March 2020 among schools with a concentration of Roma students show even more disturbing results. In two-thirds

of schools, students without devices are between 10% and 75%. In a quarter of them, more than 50% of the children are such, and in some schools - more than 75% (Kolev, Krumova 2021: 16).

The situation is similar for many of the children on additional support in small settlements who do not have access to the Internet or do not have devices through which synchronous learning can take place.

Internet coverage is another limitation to conducting training in an electronic environment. The difference in internet connectivity between Sofia, Plovdiv, Varna and smaller towns in the country is large. There are frequent interruptions, poor picture, sound and connection between the participants in the process, which distracts the students and makes learning ineffective. Lack of internet connectivity is a very serious problem for vulnerable groups. Some of the larger neighborhoods lack proper connectivity, and more often the problem is that some families cannot afford a proper internet plan.

In reality, access to digital devices and the Internet for students who live in poor families, Roma communities, in villages and remote areas turns out to be limited. 36.8% of the experts define access to the Internet as the reason for the lack of education in an electronic environment in some of the schools. (Fig. 1) The objective situation gives reason to the ombudsman in a special recommendation to the Minister of Education and Science to warn that over 70 thousand children, which is about 10% of all students in Bulgaria, are not covered by distance education, the reasons are often lack of technical devices and/or lack of internet coverage (Children and COVID-19 2021: 17). In actual fact, the social inequalities in our society, which determine the digital ones in their various dimensions, stand out strongly - availability of digital devices, skills to work with them, access to the Internet. They have a significant potential in the future to deepen existing social inequalities and generate new ones. Children living in poverty, in families with long-term unemployed parents, children with special educational needs, children in alternative care and children in conflict with the law are among the most affected groups, both because of their special learning needs and because lack of funds and access to technical devices.

For children with SEN, due to their specific potentialities (Mantarova 2022: 99) needs and the specific organization of work with them, the transition to distance learning for a lot of them effectively meant an interruption of education. According to a report by UNICEF Bulgaria, only 63% of inclusive education specialists work regularly with them during the emergency, helping only half and even less than those who usually support (Rapid assessment of the impact of COVID-19 on education: deepening the gap 2021: 25). For this group, the lack of appropriate teaching resources, adapted technical means, access to electronic textbooks through screen readers for blind children, adapted textbooks for children with

different disabilities and needs, adapted and interactive materials for working in an electronic environment are particularly acute problems, which definitely leads to regression in their development.

State institutions and NGOs attracted to the cause are looking for a solution to the problems that have arisen. The MES is taking action to ensure internet access in places where there is none and purchase 16,000 computers for teachers and students. But the method of distribution of the funds allocated from the state budget (the amount each school receives is determined according to the number of students in it) predetermines the reproduction of inequality. A large part of schools with a concentration of vulnerable groups are located in villages, educate a relatively small number of students and therefore receive an insignificant number of computers, far below the real. The principle of distribution of mobile computers is similar according to the project “Equal access to school education in crisis conditions”, which is implemented with funds from the European Instrument to Fight Against COVID-19.

The second obstacle to overcoming the problem of the lack of devices is the fact that laptops purchased with funds from the state budget have very high characteristics and, respectively, a high price. School principals are worried about providing them to students for use at home, and in even parents themselves refuse to receive and bear responsibility for such expensive equipment.

Another set of problems that appear are related to the participants in the learning process. Until now, students use digital devices and the Internet mainly for entertainment and communication in social networks, while the use of learning platforms and educational resources is so far more limited. The assessment of the students’ real skills to participate in learning in an electronic environment led 10.5% of the experts to state in the course of the survey that among the main barriers to the process is the lack of adequate digital skills among students.

This fact is in the background of emerging technical problems caused by the poor internet connection and ultimately affects the concentration and the motivation for active participation.

Maintaining interest in online lessons is also identified as a problem. Even when formally participating in distance learning, students often become distracted, lack effort, and quickly lose active learning habits. The observed is determined by a number of factors. On the one hand, the duration itself - according to a study, in distance learning children spend an average of six and a half hours in an online environment per day. On the other hand, it is unrealistic to rely on the consciousness and responsibility of children aged 7-17 years. This is especially true for children from vulnerable groups, without parental support, living in an environment where education is not among the priorities in the value system. Teachers, who themselves have no experience in this type of learning, are faced with the task of finding a way to motivate children to actively engage in online learning.

Specific problems are also identified for children with special educational needs. In the new conditions in which the educational process takes place, the hours for working with resource teachers and with specialists turn out to be insufficient. And they are especially important because these children do not have the necessary skills to cope with online learning.

During the first weeks of introducing learning in an electronic environment, the main problems were related to the technical setup of the platforms and getting used to the new teaching mode. This change did not cause particular difficulties for the young (but teachers under 35 are less than 20%), but for older people working online was proving to be a difficult test. It was the lack of digital skills among teachers that is pointed out by 2.6% of the experts as a reason for not being able to quickly organize the introduction of learning in an electronic environment (Fig. 1). In the new conditions, teachers, in addition to presenting and explaining the taught material, must also deal with technical challenges. According to 23.7% of the questioned experts, the lack of preparation for remote work among teachers is among the main difficulties facing schools in their area. The opinion of 31.6% is that teachers are not sufficiently prepared to work remotely (Impacts of the COVID-19 pandemic on preschool and school education - the point of view of specialists working in regional departments of education 2021: 7).

Especially for children with special educational needs, formality in the work of resource teachers and a lack of sufficient specialists, non-application of an individual approach now are becoming particularly visible.

Training in a new way presupposes new needs for personnel - first of all, an increased number of mediators. With the suspension of classroom activities and the real impossibility of introducing learning in an electronic environment in certain places and for certain groups, remote work with students is done by distributing learning materials and tasks - the only way to reach students without devices. For this reason, the role of educational mediators in schools with a concentration of vulnerable groups is key, both for reaching all students and for the quality inclusion of the children reached. According to approximately 7.9% of the experts, in their area, there is a problem with the number of appointed mediators, as the volume of work is too large.

Another group of problems are those resulting from deficits in available training materials, methodologies, guidelines. 13.2% of the surveyed experts (Impacts of the COVID-19 pandemic ...2021: 8) believe that clear guidelines and a unified approach to the initiation of distance learning have not been provided. Students have been forced to learn remotely through a series of social sharing platforms, often without regulation and without standards even within the same school. The shortage of educational materials and resources for learning in an online environment becomes obvious - lack of pedagogical models for teaching and education

in the new electronic environment at a distance. When it comes to the learning content, 36.8% of the experts find that the biggest negative is that it is not adapted to be taught online. And for some schools, due to their specifics or that of the students, they cannot introduce learning in an electronic environment.

How successful distance learning will be also depends on family support. In the course of distance learning, nearly 80% of parents are engaged as assistants. Observations show that, in general, parents find it difficult to support their children when they find themselves in the new situation, a significant part of them do not know how to be useful to the children. For specific reasons, there are particular difficulties for several groups of parents and they cannot provide the necessary support to their children studying in an electronic environment - families in which both parents work on the front line, such as doctors, medical specialists, teachers; parents with insufficient capacity; parents of children with special educational needs (SEN). And in this regard, inequalities speak for themselves. Children with parents with low education cannot rely on support in the family to acquire the necessary digital competences and to acquire the training material.

Parents turn out to be the main resource for children, especially for children with disabilities. But according to themselves, only 20% feel fully prepared to support their children during distance learning, while 50% of parents said that they fail to do so. (Rapid Assessment of the Impact of COVID-19 on Education: Deepening the Gap 2021: 34)

## CONSEQUENCES OF DISTANCE LEARNING

The shift to distance learning definitely had a negative impact on children's range over – both during the distance learning period and beyond. Already at the beginning of its introduction, 13.2% of the surveyed experts from the RDE shared their concerns that the number of children who did not attend school would increase. 5.3% of the representatives of RDE in the country believed that the number of students who wanted or could continue their education after secondary school would decrease (Impacts of the COVID-19 pandemic ...2021: 15).

Children from risk groups, where the probability of dropping out of the educational system is high even in a normal situation, remain outside of education in an electronic environment. As already said, a certain part of them do not have electronic devices and/or access to the Internet. Moreover, it is mainly about children who are also in a disadvantageous situation in other respects.

A vulnerable group, where the scope is noticeably reduced, are children with special educational needs who, due to their special educational needs, can not participate in learning in an electronic environment on an equal basis with children

without problems. The closure of the Centers for Special Educational Support and Day Centers in the community actually isolates the children who use them and greatly reduces their opportunities for personal development. The prolonged lack of a therapeutic and educational process for children and students with SEN leads to a deepening of problems in their development, loss of motivation for learning and active participation, a breakdown in their social skills and dropping out of the educational system subsequently.

In addition to reducing the number of students involved in studying in an electronic environment, and in general in a distance form, in the next academic year a reduced range of children in the education system as a whole is registered - a range lower than the pre-epidemic levels. The experts emphasize that "Distance learning proved particularly problematic for students who were at risk of dropping out or leaving the education system early. For many of them, distance learning turned out to be a de facto dropout" (Kolev, Krumova 2021: 25). The children who have been reintegrated with great efforts, now are at risk of dropping out of the education system again. In many places, the interaction between state institutions established in the course of the previous work also disappears completely. What has been said is particularly visible in regions such as Sliven and Yambol, but it is also valid for many other schools with a high representation of students from vulnerable groups.

Regarding the qualitative side of distance learning, there is good reason to draw a general conclusion that, although its implementation is better than interruption, in terms of the qualitative characteristics of the results, it has led to cognitive deficits, lower success of students (according to the cited UNICEF study, every fifth student reports worse academic results than the previous ones), a decrease in motivation, the inability to form learning skills in the youngest and a decline in the rest. For young students from I to IV grades, who are now laying the foundation of their education, online education does not help to create them skills for learning, for communication with teachers and their peers, which also affects their results in educational activities. It is a widespread opinion of parents that the distance education lasting more than five months has affected the preparation, as the absorption of some of the material is insufficiently thorough and there is no way to catch up.

As for the vulnerable groups, the negative effect is even stronger. The lack of face-to-face training has led not only to serious deficits in knowledge, but also to the loss of hard-to-form learning skills and a host of other necessary social skills. To compensate for the deficits in schools with a concentration of Roma children in June 2021 additional face-to-face trainings were organized within the framework of the "Support for Success" project. Two-thirds of schools have enrolled both students who participated in additional learning groups before March 13 and those who did not effectively participate in distance learning.

An indirect recognition by the MES of the shortcomings and poor results of distance learning is the reduction of the material for the National External

Assessment of Students (NEA) from grade VII and the state matriculation exams for grade XII at the end of the school year. The results of the compulsory matriculation exam are also a confirmation. While in 2021, after the reduction of the material, the average grade in Bulgarian language and literature was 4.14 or 52.44 points, in 2022 and 2023 there was a decline. Moreover, in 2023 the lowest grades since the beginning of the exam were achieved - 3.93, with 17.7% being poor grades. In points, the result was 50.14 - 2.5 points less than in 2022. Even in the second exam, which was an optional subject, the poor marks were 10.63%.

### OTHER EFFECTS - EXCEPT THOSE RELATED TO EDUCATION

The effects of closing schools are not limited to children's education, they also affect their physical and mental condition and development, communication skills, socialization in general; their security, including the risk of victimization, especially in virtual space.

Long hours in front of the screen are a serious challenge, especially for young students. It is no coincidence that, when asked to assess the main disadvantages of distance learning, more than three quarters (78.9%) of the surveyed specialists from RDE point to the fact that children spend too much time in front of the electronic devices with which they study. For their part, doctors warn of frequent eye problems as a result of standing in front of the screen for many hours.

The situation definitely affects mental health as well. Health experts point to the manifestation of signs of loneliness, depression, increased levels of anxiety, low self-esteem and aggression as a consequence. The mental atmosphere in families is also affected. As a result of the confinement in home, the excessive contraction and even loss of personal space, the increased care of parents for children and the burden of their educational duties, mental problems and an increase in domestic violence are registered. The hotline call statistics are significant. According to the official data on received calls and signals of the National Telephone Line for Children, in March 2020 more than 730 more calls were made compared to February. The majority of them were after the declaration of state of emergency. As a rule, children reported violence or serious conflicts in the family.

Socialization is affected, as social contacts at this age and the acquisition of communication skills are an important part of personality formation.

It is also not to be overlooked that the greatly increased use of the Internet increases the vulnerability of children in cyberspace and the danger that, due to their gullibility and lack of experience, they become victims of cybercrimes.

## CONCLUSION: LONG-TERM PROJECTIONS AND THEIR PREVENTION

The reduction in the range of children in school, the digital inequalities leading to social inequalities, educational deficits accumulated during distance learning, and other consequences that go beyond the field of education will have their continuation forward in time and in all areas of life, where students who have completed long distance education will be realized. This makes it necessary not only to identify and analyze the consequences, but also to plan and implement actions to neutralize those that have already occurred and for future prevention, if at some point we are faced with the impossibility of conducting on-site training. This means to correctly determine, without regard to possible image damages, the parameters of the lasting consequences of distance learning and, on the basis of specific and differentiated information, to take measures to compensate for the existing cognitive and socialization deficits.

With a view to future learning in an electronic environment, it is necessary:

- reducing digital inequalities – ensuring for educational purposes equal access to technical devices and Internet connection and developing the necessary skills for working with them;
- increasing the qualifications of teachers for training in an online environment;
- developing and providing teachers with appropriate methodological materials;
- support for students whose parents cannot provide it;
- conducting additional trainings to compensate for gaps.

Specifically for children with special educational needs and from vulnerable communities:

- introduction of new approaches and forms for additional support for personal development;
- provision of specific technical means – for example electronic textbooks through screen readers for blind children;
- appropriate form and organization of work of resource teachers and other specialists.

Above all, however, it is necessary to emphasize what the practice of 2021 has shown - distance learning cannot be a substitute for face-to-face learning. It can only enrich and supplement it.

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