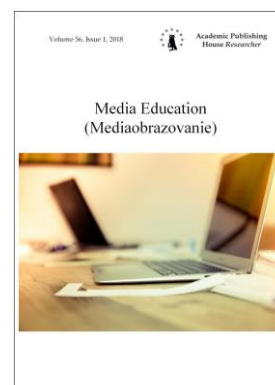




Published in the Slovak Republic
Media Education (Mediaobrazovanie)
Has been issued since 2005
ISSN 1994-4160
E-ISSN 2729-8132
2020, 60(4): 627-635

DOI: 10.13187/me.2020.4.627
www.ejournal53.com



Results of Schoolchildren Teaching Through Media Technologies in the Context of a Pandemic: Investigation of Parents' Opinions

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Abstract

In this paper we will analyze parental view on the difficulties in organizing mass education for students through media technologies usage in the spring of 2020. The goal of the research is to study the most significant learning difficulties in the new format, which have been pointed out by parents. The following methods of cognition have been used in this study: problem method, survey method, system-structural method. The study engaged 400 parents from different regions of Russia (54 regions). Parents were asked to answer 5 questions. Parents identified 3 forms of learning through media technologies used by teachers: extended "take-home assignment" mode; online lessons mode and mode of working with educational platforms. Parents pointed out the poor quality of education by means of the media technologies to have been chosen. The study showed low parental satisfaction with the learning process. A media technologies learning difficulties model was created (according to parents). Among the significant learning difficulties, parents highlighted the low media competence of the pedagogical as well as parental communities, the shortage of competent mechanisms for children's knowledge assessment, the lack of proper motivation for learning as well as zero independent work skills. Parents indicated that children did not have the opportunity to learn while communicating interpersonally with the teacher and peers. A fore-referenced difficulties were identified by parents as the major setbacks to media technologies usage in modern schools. Therefore, in the minds of parents, this learning model should be investigated intensively and seriously improved by the teaching community.

Keywords: media technologies, training, media competence, learning difficulties, survey, modeling, parents, learning contentment, training quality.

1. Introduction

Teaching children in schools in Russia has faced a real challenge coming from the epidemic of the new coronavirus infection. In the shortest term, students, teachers and parents had to switch to forms of interactive communication through multimedia technologies. Thus, traditional training has been replaced by distance learning using a variety of media technologies.

In general, such a jump has demonstrated unpreparedness of the Russian school to study in the new format. That's why this type of training has stirred up a heated debate among members of both pedagogical and parental communities. The Russian segment of the Internet during the period of March to May 2020 was overflowed with emotional posts of parents who spoke out against the new educational forms usage. This goes to prove that the new type of knowledge acquisition

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against a backdrop of containment measures was quite difficult for children and parents, as well as for teachers.

2. Materials and methods

The primary source of this article was a survey conducted among 400 parents of students from different regions of Russia (54 regions). The survey was conducted using modern means of communication on the Internet, which gave us a chance to find out the opinion of parents from different parts of the Russian Federation.

Including in particular, a CAWI (Computer-assisted web interviewing) method was used. In particular, CAWI (Computer-assisted Web interviewing) method has been used as an effective way of raw information collection and processing.

The most popular in Russia social media service *Vkontakte* was used for CAWI holding. The social media service reaches coverage of 73.4 mln people as at the start of year 2020 (Pfanshtil, 2020). An invitation letter from the author of the paper was placed in the social media service. It asked parents to take in the online survey. The total amount of people that agreed to take in the survey was 957. But only 400 parents were chosen for the survey holding since the investigation was conducted with the consideration of respondents' places of residence. As the families have not only different material and social situations but they also have different media technology access for learning.

Urban residents in the number of 303 people took part in the investigation (75.75 % of the total number of the people in the survey) and rural residents was up to 97 people (24.25 % of the total number of the people in the survey). The proportion was chosen not incidentally. When choosing the respondents, we relied on data given by Federal State Statistics Service in 2019, whereby urban residents in Russian Federation are 74.59 % and rural residents are 25.41 % (Urban population proportion, 2020).

Amongst urban respondents, 65 people are city-dwellers (16.25 % of the total number of the respondents), 182 people (45.5 % of the total number of respondents) live in cities of more than 500 000 people, 28 people (7% of the total number of respondents) live in small towns – homes to less than 100 000 people.

The selection let us to interview parents living in different parts of Russia which makes interpretation of the results authoritative.

The age of the parents having taken the survey ranged from 30 to 45 years.

The following methods of cognition have been used in the study: problem method, survey method, system-structural method. The author's argument is based on the problem method. The use of this method let us simulate the evaluation approach to the problem of learning difficulties through media technologies usage. The survey method allowed us to find out the parents' viewpoint on the problem under consideration. The system-structural method defines the major specifics of the media technologies learning difficulties model.

3. Discussion

The development problem of parental competence in the field of media technologies has been studied in the scientific literature (Skorova, Smyk, 2019). In such event, A.V. Fedorov's research was used while addressing the problem of media competence and media technologies (Fedorov, 2017).

In particular, in the study media technologies are considered as a means of passing information, educational information in this case. What is more, media technologies use the hottest Internet features primarily to create a specialized environment, i.e. media landscape that allows subjects to share information, including learning process arrangement (Park, 2017).

E. Camarero and D. Varona (Camarero, Varona, 2016) considered increased media literacy as a factor in positive social changes. Some scholars provide a foundation for evaluating media literacy efforts and contextualizing them relative to the current media landscape (Bulger, Davison, 2018).

Generally speaking, the thoughts of to what extent media technologies use is positive for personal enhancement of an adolescent in the society are being discussed in scientific circles. (McDool et al., 2020; Scannell, 2017).

This fact is pointed at by modern scientists, such as D. Taylor, J. Grant, H. Hamdy, L. Grant, and others, who consider media technologies as a promising direction for modern children teaching (Taylor et al., 2020).

Whereby, scientists arrive at the conclusion that if properly organized, the use of media technologies in the learning process can have a positive impact on the development of the cognitive and personal sphere of children (Gibson et al., 2018; Kabha, 2019). Nowadays the cyberspace is a home place for contemporary digital generation, accustomed to convergence technologies as a way of integration into the Worldwide Web (Reid, Norris, 2016).

Moreover, the learning process through media technologies usage must be properly organized and the most optimal media technologies to respond to inquiries of modern secondary school pupils must be used. Today this point of view is supported by many scholars (Benhamdi et al., 2017; Macqilchrist et al., 2020).

In the spring of 2020, because of the new coronavirus contagion, Russian pupils had to switch over to training through media technologies.

Pandemic caused refusal of conventional teaching in all parts of the world. Consequently the problem is paid attention by both foreign and Russian scientists.

In particular, scholars abroad T. Fawnes, D. Johns, G. Aitken suggest practical insights to achieve mostly seamless change from resident-based education to online-based education in the presence of COVID-19 pandemic. In particular, the authors suggest to teachers using more self-facilitated tasks for students, making special online tests based on the material covered, using videos and carrying out special educational projects in connection with students. The keynote of the last-named is to acquire knowledge while playing a computer game mutually. In the authors' opinion the mentioned educational tools to be used by the teacher should provoke interest of the students and give them extra incentive to studying (Fawns et al., 2020).

Similar practical suggestions are given by the authors of the paper "Twelve tips for rapidly migrating to online learning during the COVID-19 pandemic" J. Sandars, R. Correia, M. Dankbaar, P. de Jong. Notably, the researchers point out that teachers can use LMS (Learning Management System) recourses. Which are platforms for communication, content uploading and assessment. It is a modern convenient tool to structurize the curriculum and bring teaching methods into compliance for the achievement of learning aims. LMS simplifies migration to e-learning upon condition that it is accessible remotely and all concerned are aware of its structure. The systems employ built-in analytics to control students' progress and identify the one who needs special support (Sandars et al., 2020).

The viewpoint is also hold by the authors of the paper "Ten maxims for out of class learning to outclass the academic challenges of COVID-19" by P. Eachempati, K. Ramnarayan. Their research contains an interesting insight positing web-based assessment and students' knowledge level determining in a traditional form differ from each other. The main criterion of the web-based assessment is its objectiveness and new learning forms matching. With that in mind the authors suggest that teachers should make tests using platforms for online testing, assuming the material to be studied by the children (Eachempati, Ramnarayan, 2020).

Practical guidance for students' knowledge assessment organization with the help of media technologies are given by M.Wadi, M. Abdalla, H. Khalafalla, M.Taha in the paper "The assessment clock: A model to prioritize the principles of the utility of assessment formula in emergency situations, such as the COVID-19 pandemic". In particular, the authors note that the main difficulty of learning through media technologies is correct students' knowledge assessment. The authors suggest a system of "assessment clock dial" to show shift in priorities in the period of COVID-19 pandemic. The main takeaway of the scientists is that the principles of acceptability and feasibility step forward in light of the current situation. We shouldn't forget about validity and reliability rates when conducting remote examination, especially final exam. They can be kept up if only test tasks of high quality have been chosen from the assessment tools stock (Wadi et al., 2020).

The other group of researchers from Mohammad Bin Rashid University of Medicine and Health Science in Dubai (M. Sudhir, S. Mascarenhas, J. Isaac, J. Alfroukh) in their paper "Adapting to the need of the hour: Communication skills simulation session using an online platform during COVID-19" told about execution of a pilot project on students soft skills training in online mode. Each such learning session began with a briefing to lay dawn aims and assign tasks then the video conferencing meeting took place. The work was carried out routinely due to the plan. Impressions exchange was a mandatory element of the conference meeting. The authors of the project point out that 90 % of the students consider the project to have helped them to convert an opportunity of learning through media technologies under the conditions of pandemic more effectively (Sudhir et al., 2020).

Alongside foreign solutions for organization of teaching process through media technologies under the conditions of pandemic a series of studies devoted to the teaching analysis have been published recently. However, they are primarily the studies of teaching process organization through media technologies in Russian higher educational institutes.

For instance, the scientists stick to two main approaches:

The first approach is a transfer of traditional forms training into online mode. The approach is characterized by keenness to save the traditional forms.

The second approach is an attempt to define new educational tools for teaching through media technologies.

Exemplarily, the first approach is described by G.U. Lutfullaev, U.L. Lutfullaev, Sh.Sh. Kobilova, U.S. Nyematov in the paper “E-learning experience under the COVID-19 conditions“. In the paper the authors analyze their own teaching experience in the matter of web-based lessons for students of Samarkand institute. In particular, the authors point at some difficulties of teaching coming from impossibility of students’ practical training with the help of special equipment. Concurrently, they note that theoretical classes could be organized through the use of ZOOM. As a result, theoretical classes taken as a whole were on a par with traditional form lectures. The authors note that in spite of stressful situation in which high school community had found themselves, they managed to save the quality of education. It has been linked to correct selection of course materials by the lecturers according to purposes and objectives of teaching and characteristics of educational process in the online mode. The lecturers managed to supply students with learning result. And it gave rise to positive feedback ([Lutfullaev et al., 2020](#)).

The second approach was reflected in the paper by Alekseeva A.U., Balkizov Z.Z. “Medical education in the period of COVID -19 pandemic: challenges and solutions“. The authors pay attention to the difficulties of teaching organization through media technologies in modern Russian institutes of higher education. In particular, they analyze the learning process stages, ranging from lectures and practice to students’ proficiency control procedure in a new web-based format. Therewith the scientists argue that traditional education and teaching through media technologies require of the teachers new professional skills and competences. That is a teacher must provide oneself with new educational tools: specially made web-based lectures through the use of presentations, videos and others, test design, video guidance construction aiming to drill students’ practical skills and learning resource creation in cooperation with students ([Alekseeva et al., 2020](#)).

As to research works on children teaching organization through media technologies they are very few in number currently. One example is a paper by Kiselyova A. “E-learning in primary school in a time of pandemic“. In the paper the author who is a practicing teacher points at main difficulties of the schooling organization. In the author’s opinion the difficulties are common web-based education standard absence which must be sent by the Ministry of Education as well as limited training resources. Teachers have also experienced problems while organizing learning with the help of special platforms they not always had the skill of ZOOM using. Besides, teachers had a hard time when giving lessons of students` academic performance rating ([Kiselyova, 2020](#)).

The remarkable thing is that academic papers dealing with students’ teaching process in the period of pandemic exist more than resembling researches devoted to teaching process study of pupils through media technologies.

It is due to the fact that faculty members pay more attention to scientific work and public their papers more often than school-teachers whose work is focused on practical work in a greater extent.

Currently, there has been observed the lack of scientific studies of teaching pupils through media technologies, as exactly children were in trouble in a greater degree than students because of their age.

Besides the mentioned papers focused on outcomes and difficulties analysis of teaching through media technologies which are specified by the members of the pedagogical community. Unmistakeably, there is a lack of researches to study parents` opinion about teaching their children against the background of pandemic.

All the aforesaid specifies the topicality of our research work.

It is worth noting that the teaching process organized in the background of pandemic has been negatively responded in general.

This critical feedback was publicly expressed by parents and became the subject of public discussion.

In order to study the reasons for the negative feedback from the parental community, we have undertaken this study. The most significant new format learning difficulties were pointed out by parents. This fact needs to be carefully examined, as it allows us to identify the "weak points" of training in a new format. It determines the scientific novelty of our research.

4. Results

A survey to define the parents' attitude was conducted.

Parents of students were asked to answer 5 questions.

1. Identify the range of educational media technologies used by teachers.
2. Appraise children's education when using media technologies.
3. Elucidate the total amount of time spent by the family and child on learning activity.
4. Analyze overall satisfaction with the learning process through media technologies usage.
5. Describe the difficulties of learning through media technologies usage.

When answering the first question, parents noted that among the learning media technologies, teachers chose the ones they had been aware of: phone, social networks, Viber, *WhatsApp*, email and electronic diary (65 % of respondents). Teachers paid far less attention to video services (*Zoom*, *Skype*, etc.) (10.73 %), online platforms (7.75 %), online lectures on *YouTube* (9.5 %) and educational portals (7.5 %).

Consequently, teachers used the media technologies they were familiar with. But the tasks to be performed were based on the aforementioned technologies and they were mostly not of a creative cognitive nature for children, but of a reproductive one. For example, children were asked to perform 3 exercises from a Russian language textbook, then the results were photographed and sent to the teacher via email, *Viber*, or *WhatsApp*. However (as it was indicated by parents), many pupils did not perform tasks independently, as they would have done in the classroom offline. But they used ready-made answers to the exercises from the textbook presented on the Internet. Teachers suggested pupils to record their oral answers to questions on subjects and send video or audio file in a similar way. But even in this case (as evidenced by parents), children often used crib notes and filmed a video or recorded their voices several times, and only the most successful tryouts were sent.

That's why, 85 % of parents indicated that the learning material assimilation under the circumstances was difficult for children, and the quality of education reduced. The reason for this response was the fact that teachers, in the opinion of parents, chose the media technologies that kept their children out of high learning results. The real knowledge of children was difficult to evaluate, so the "formal" knowledge was evaluated.

Furthermore, 86.25 % of parents indicated that the process of learning through media technologies usage took more time than the process of traditional learning. In other words, parents compared the time that their children had spent while preparing homework (until March 2020) with the time spent on home education during the quarantine period.

In the study a relationship between the age of the pupil and the amount of time that he or she spent on learning was found out. Most parents of junior students noted that the learning process took from 3 to 6 hours, while parents of students in grade 5 and up indicated that the children spent from 6 to 9 hours on their home task.

Let's look at the data obtained in tabular form.

Table 1. Total amount review of time that the family and child spent while studying (data in percentage terms)

Parent status	from 1 to 3 hours	from 3 to 6 hours	from 6 to 9 hours
Parents of students in grades 1–4	1.33 %	62.66 %	36 %
Parents of students in grades 5–9	0 %	28 %	72 %
Parents of students in grades 10–11	0 %	40.67 %	59.33 %

After we studied learning satisfaction, the following results have been obtained: only 3.75 % of parents were fully satisfied with learning, 24.5 % were partially satisfied, and 71.75 % were not satisfied.

We believe that this dissatisfaction is due to the fact that training in the new format required a lot of additional efforts from parents to organize this process, including the search for technical

capabilities for this kind of training, and we also believe that parents were not satisfied with the quality of students' knowledge that was acquired in the educational process of the new type.

Let's list the difficulties of learning through media technologies usage indicated by parents (parents could indicate several difficulties):

- degraded quality of training and relaxed knowledge assessment (82 %),
- poor media competence level of teachers as well as parents (78 %),
- parents' awareness of the fact that children do not have the proper level of motivation for learning and academic independence (60 %)
- parents' awareness that children do not have the opportunity to learn in a students body in the process of interpersonal communication with a teacher and peers following the principles of competitiveness and mutually supportive relationship (31.25 %).
- technical difficulties (lack of a computer for studying, Internet access problems, etc.) (24.5 %).

The difficulties highlighted by parents show that the technical difficulties (lack of a computer in a family, lack of Internet connection) don't hold the top spots, but difficulties in organizing high-quality education under new markedly different conditions have the lead.

The examination of media technologies used by teachers allowed us to identify 3 forms to have been used: widened «homework» mode; online lesson mode; mode of working with educational platforms.

Teachers relied on the former form the most frequently, which indicates a low general proficiency of their media competence. Generally speaking, teachers were not ready to use media technologies actively. In that space children were asked to do classwork and at the same time to be involved in class participation using a textbook or a workbook.

In these circumstances, parents pointed out that in the widened "homework" mode they actually had to teach their children independently. Students sought advices from teachers. They were consulted by phone, social media, or using *Viber* and *WhatsApp*. By so doing, teachers created groups or chats in social networks to communicate with children. They tried to explain the tasks to them. However, this form of interaction did not have a similar effect as a full-fledged lesson conducted in the traditional form.

Parents noted that it was difficult to find training equipment and organize high-quality online lessons (children got distracted, dealt with unrelated matters during class time). Students were not ready to listen to the teacher as they had done at the conventional classroom lessons. The assessment forms were also obstructed in this context.

Parents specified in their responses that the educational platforms working mode was also difficult, since the tasks posted on the educational platforms were not correctly adapted to meet the specific requirements of educational programs that children worked on. So the children could not do a lot of tasks on their own.

By reference to the above mentioned, parents spoke that the media technologies to have been chosen for teaching did not allow to achieve the necessary result, i.e. they didn't help to organize the process of high-quality new knowledge acquisition by students.

Answering the second question, parents pointed at the low quality of education through the chosen media technologies usage caused by the lack of real knowledge control forms. Students used answer books from the Internet and utilized the outside help when doing their tasks. In broad terms, from the perspective of parents, the essence of such «remote» training for children reduced to just pretending but not real obtaining knowledge. Consequently, according to parents a process of replacing real learning with a "digital surrogate" took place. That was due to the fact that teachers did not know, on the whole, how to use new media technologies effectively and how to organize knowledge assessment. They did not have methodological experience in organizing such kind of training. Besides, some of them did not even have computer skills. Hence, the new type of training generated a serious stress for all concerned. Generally speaking, that explains the poor quality of education indicated by parents.

The study showed low satisfaction of parents with the learning process. This dissatisfaction occurs due to the difficulties faced by parents and children in the organization of teaching process. This low satisfaction indicates that parents consider the quality of children's knowledge obtained in the course of training unsatisfactory.

86.25 % of parents indicated that the process of learning through media technologies usage took longer than the process of traditional learning. Explaining the fact, parents referred to the fact

that the study load on their children had increased, and it required additional time resources. By so doing, parents compared the time to have been spent by their children on doing the homework before March 2020, and the time they spent on training after the quarantine had been enforced.

The study found a relationship between the age of the student and the amount of time spent on learning.

Learning through media technologies required sufficiently large time expenditure. And herewith parents of elementary school children had to pay much more attention to the children's learning process than parents of older children who performed some of the tasks on their own.

At the same time, secondary school children studied, on average, from 6 to 9 hours a day. This is due to the large number of subjects that children study at school, as well as the fact that the volume of tasks was large. In these conditions, parents of secondary school children indicated that the time spent by them on the computer performing educational tasks, had significantly increased. According to parents, substantially all teachers offered children reproductive tasks, but their number had increased. However, parents testified that some teachers tried to use the quarantine time to attract children to creative cognitive activities. Teachers offered a large number of creative tasks. For example, the tasks include preparing a project, creating a presentation, writing an essay, etc. Thus, there was an increase in the variety of tasks that required students to work individually. Besides, some of them were short on research skills not to have been formed at the appropriate level. And this circumstance also caused difficulties for children.

Based on the results, a model of difficulties people have with this kind of learning (according to parents) can be drawn up.

1. Parents point out low media competence of the pedagogical and parent community as a significant difficulty. The lack of mechanisms for quality assessment of children's knowledge matters too;

2. An important difficulty is lack of proper motivation to learn, i.e. children are not ready for strenuous independent work to acquire knowledge, and they often try to simulate the learning process;

3. The last place in the list of significant difficulties was taken by the difficulty of children's not having the opportunity to learn in a team in the process of interpersonal communication with a teacher and peers following the principles of competition and mutual support;

4. Technical difficulties are marked only on the periphery of difficulties. And they can be removed effortlessly.

Considering the first difficulty to be the most critical, parents pointed to the lack of training relating to active media technologies use by teachers. Before the quarantine period teachers had kept focus on giving traditional lessons, that's why they tried to simulate the forms of learning they knew using media technologies (for example, to give lessons on Skype), but the effectiveness of that type of classes was blunted significantly.

Parents also considered the new forms of education had indicated the fact that many students faced a problem of reduced learning activity motivation. Extrinsic learning motives were prevalent in many children (eagerness to have good marks, fear of being punished, obedience to parents), which made the children simulate the process of knowledge acquiring against the backdrop of new forms of learning.

Parents were also concerned about minimization of interpersonal interaction between the teacher and students, so the process of knowledge acquiring forfeited an important component.

After having had the questions answered, a discussion with parents was held. The discussion pointed out that the respondents were aware of being incurious about their children's sound academic background. Parents understand that they can not organize the learning process at an adequate level independently, as they have no knowledge base in a number of subjects. At the same time, the fairness of teachers, the lack of a well-managed system of teaching through media technologies usage caused panic among parents. The inquiry returns show the parents' fear of the reoccurrence in the fall of 2020, if the number of the new coronavirus cases increase.

According to our reckoning, the survey results could be explained by the fact that the model of learning through media technologies usage offered to schoolchildren in the spring of 2020 has demonstrated its inefficiency in broad terms. That is associated with the system unpreparedness – some students did not have the technical capabilities for training, teachers did not have the necessary skills to work in the new conditions. They suffer from a substantial methodological base shortage. Besides, they were pressed for time required by a transition to training through media

technologies usage. Online learning platforms were not correctly adapted to the specific educational programs being followed by students, and video tutorials powered by the platforms failed to meet the requirements of the use in the educational process. A student knowledge assessment mechanism hasn't been created. Besides, learning and cognitive activity skill for knowledge acquiring was not developed amongst students, and they were not motivated to learn through media technologies.

The current situation has highlighted the fact that the modern school is not ready for a mass crossover to learning through media technologies. The question is not just about the students' lack of technical capabilities or media resources working skills. The new educational media technologies implantation requires a rational approach to provide an intelligent combination of traditional and innovative forms of education for children, the use of media technologies as an additional resource for acquiring of knowledge, the possibility of using these technologies for a limited number of children having high level of educational motivation as well as ability to operate alone for independent work. Media technologies usage also counts on the teachers' promptness to organize this process. For example, teachers should be able to create their own resources for media training (for example, their own lectures on You Tube, video tutorials on educational portals, testing systems, etc.). To improve the effectiveness of training through media technologies it is also necessary to analyze the training tasks carefully. Examples may include case technologies, development of students' own projects, etc.

Generally speaking, the point at issue is that it is necessary to create a system of education using media technologies in the process of training at the country level.

5. Conclusion

As a result of the study, it was found that:

1. The parental community discerns obvious difficulties of teaching students through media technologies usage in the context of the pandemic. This kind of training had not been prepared. Hence, parents had to undertake the major portion of the teachers' business;
2. Parents highlight the difficulties of training through media technologies usage and they address the low level of teachers' as well as parents' media competence, the students' knowledge quality decline, the inability to organize the individual work of students at the appropriate level, lack of motivation, etc.;
3. Parents are ready to use media learning technologies as an additional resource to obtain knowledge. But they strongly disagree with the learning model to have been proposed to them in the spring of 2020. Therefore, this model of training should be subjected to a rigorous evaluation and serious adjustments by the teaching community.

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