

# Digital Literacy as a Condition for Positive Experience of the COVID-19 Lockdown for Families With Preschool Children

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## ABSTRACT

Today the COVID-19 pandemic consequences for the preschool education system is one of the most popular research topics, as the lockdown led to serious disruptions to the usual way of family life that is a key condition for the normal development of a child. In Russia, a typical reaction of the authorities to the pandemic was the massive closure of childcare enterprises, that gave many families an additional burden in the form of the task of mastering the preschool education program. In this situation, digital technologies are of particular importance for the successful organization of preschool education in the family and the preservation of an emotionally positive tone in the family, according to the authors of this paper, the educational potential of which depends on how much the preschool child and his family are involved in them. Based on the results of the study, the authors conclude that digital literacy of family members is one of the conditions for a positive experience of the COVID-19 lockdown for families with preschool children.

**Keywords:** COVID-19 lockdown, early childhood education, digital literacy, digital technology, family education

## 1. INTRODUCTION

Around the world, measures to limit the spread of coronavirus infection included the transfer of educational institutions to a remote work. According to UNESCO data, more than 1.5 billion students in more than 180 countries, of which 155 million are preschool children, have suffered from the biggest disruption to the education system since the inception of the United Nations. [1]

The consequences of these dramatic changes for the education system, for students, schoolchildren, preschoolers and their families, are being actively discussed today in the psychological and pedagogical community [2,3,4,5,6]. According to many authors who have organized relevant studies over the past few months, one of the most affected segments of the educational system were preschool educational institutions, many of which were closed during the lockdown period [7,8].

Psychologists, educators, doctors, sociologists see the threat of COVID-19 for preschool age primarily in the consequences of a lockdown: the termination of systematic studies (elementary mathematical concepts trainings, speaking skills improvement, discovery of the world around, etc.), restriction of communication with peers, the lack of joint activities with other children, the impossibility of walking and playing in the fresh air and exploring nature. Such immersion of a preschool child, even if temporary, into a negative social and emotional atmosphere due to the COVID-19 lockdown, is assessed by many researchers as a

risk of a possible negative impact on the further development of children [9,10].

Older preschoolers look especially vulnerable in this regard, for whom the spring of 2020 was supposed to be the time to master the programs of preparation for schooling. There are about 40 million such children, according to a UNICEF analytical report, worldwide, and all of them "missed preschool education in a critical preschool year, since COVID-19 closed kindergartens and preschool institutions" [11].

The specificity of the situation in preschool education during the COVID-19 lockdown is that preschool educational institutions were significantly less affected by the measures of state structures to transfer educational institutions to e-learning (remote mode). In contrast to the systems of higher and secondary education, where the authorities took a whole package of measures to provide students with equal access to distance learning (e-learning), in Russian preschool education measures were limited mainly to the organization of duty groups with a small number of children [7,8].

Therefore, unlike students and schoolchildren, preschool children during the COVID-19 lockdown were less looked after by government agencies, although according to the Federal Law on Education, preschool education is the 1st level of general education [8]. As a result, the family received an additional load in the form of the task of mastering the preschool education program, which led to serious changes of the usual way of family life in conditions of social distancing, closing of child care facilities and isolation [9,11].

The problems of helping families of preschoolers during the COVID-19 lockdown were taken over by enthusiasts from among the employees of preschool institutions, as well as representatives of research structures, charitable foundations and other non-profit organizations [11,12]. Their work revealed, in particular, that digital technologies are of particular importance for the successful organization of preschool education in the family, the educational potential of which depends on how much the preschooler and his family are involved in them [13,14].

In fact, as noted by a number of researchers, the decisive factor was the pre- COVID-19 degree of “digitalization” of the family, since the lockdown period came very quickly and many families did not have time to change due to new circumstances [15,16]. Indirectly, according to some authors, one can also assume a relationship between the level of digital literacy characteristic of a family and how the intra-family situation developed in the spring and early summer of 2020 [9,13,17,18]. This paper is devoted to testing this assumption, which is an attempt to find out how digital literacy of family members can be one of the conditions for a positive experience of the COVID-19 lockdown for families with preschool

## 2. RESEARCH METHODOLOGY

The study included an automated, anonymous online survey using a questionnaire posted on a Google form.

**Research objective:** to identify the importance of digital literacy for families with preschool children in the context of experiencing a COVID-19 lockdown.

**Research methods:** screening of behavioral reactions to self-isolation on the part of children and adults in the family and drawing up an idea of typical patterns of behavior

### Respondents sampling

Families with preschool children: parents, close relatives, neighbors and guardians of children.

### Research problems:

1. To conduct a survey, collect the necessary information;
2. To study the self-isolation caused by the COVID-19 parents and children of the family behavioral reactions;
3. To identify typical patterns of behavior of children and adults in the family, which ensured a positive experience of the lockdown;
4. To determine the role and place of digital literacy of family members as a tool to ensure a positive experience of the lockdown.

### Research indicators

The questionnaire included 18 questions, which we divided into three blocks in accordance with the research problems. Each block contains two parameters:

1<sup>st</sup> block. Assessment of the level of digital literacy of parents and children of families with preschoolers and relation to social networks:

- self-assessment of the level of digital literacy by parents of preschool children;
- assessment of the degree of use of social networks and messengers in the family.

2<sup>nd</sup> block. Typical manifestations of parents and children in the family during the period of self-isolation in connection with the COVID-19 pandemic:

- emotional and physical well-being of children and adults in the family during the period of self-isolation;
- characteristic behavioral reactions of parents and children in the family during the period of self-isolation.

3<sup>rd</sup> block. Typical patterns of behavior of children and adults in the family that ensured a positive experience of the Covid-19 lockdown:

- the main activities of parents and children in the family during the period of self-isolation;
- the place of digital technologies in the activities of children and adults in the family during the period of self-isolation.

## 3. RESEARCH FINDINGS

166 people took part in an anonymous online survey namely preschool children parents, close relatives, guardians (hereinafter - parents) living in the Primorsky Territory. The survey was conducted in the first half of September 2020, i.e. two months after the end of the period of self-isolation and the beginning of the work of preschool institutions in the Primorsky Territory. The questions were formulated counting on the already formed opinion about the circumstances and events that families experienced during the period of self-isolation. It was assumed that parents would be able to compare the situation with digital literacy in the family before and after the period of self-isolation.

The first questions of the questionnaire made it possible to reveal the self-assessment of the digital literacy of parents of families with preschoolers and the attitude of parents to social networks. To the question “Do you consider yourself a skilled Internet user”, the majority of parents (81.8%) chose the answer “Yes, I am a skilled user”, 40.9% of respondents repeatedly use social networks throughout the day, and 47% indicated that they use social networks every day, 12.1% of respondents turn to social networks sometimes.

Most popular social networks for parents of families with preschoolers and living in the Primorsky Territory are WhatsApp and Instagram. Accordingly, 95.5% and 83.3% of the respondents prefer these messengers. Other social networks mentioned in the questionnaire are significantly less popular: Odnoklassniki was chosen by 24.2% of respondents, Telegram - 10.6%, VKontakte - 9.1%, Facebook - 4.5%.

In order to determine the level of digital literacy of children during the period of self-isolation, parents were asked: “Has the time that your child devoted to communicating with other children through digital technologies during the period of self-isolation has changed?” 68.3% of parents noted that it has not changed, remained the same; 12% of parents noted that this time has decreased; 19.7% of parents indicated that it has increased.

The increase in the time of communication with other children, is apparently due to the organization of communication by the parents as a joint activity, when the

parent not only organizes such communication, but also directly participates in it.

At the same time, when asked whether your child has become a more skilled in using of digital means of communication in the field of digital technologies during the period of self-isolation, most parents (92.6%) noted that they have become a confident user, since they easily find the necessary information, know the sites of interest, and can turn on into a new game. 7.4% of parents noted that the child remained at the same level of digital skills.

In order to find out the physical and emotional state of parents and children during the period of self-isolation, the respondents were asked a number of questions about the conditions and circumstances in which the family experienced a period of self-isolation. When asked whether the parents worked during the period of self-isolation, the answers were distributed as follows: 37.9% of parents worked as usual outside the home; 37.9% were at home, as there was no one to leave their children with; 24.2% of parents worked at home (remotely). That is, the majority of parents, 62.1%, were at home, although some of them worked remotely.

In order to clarify the emotional state of the parents during the period of self-isolation, the question was asked "how did the period of self-isolation affect you." Almost a quarter of the respondents, 24.2%, admitted that they experienced stress due to fear of a pandemic, 28.8% said they felt comfortable, 42.4% of respondents admitted that they had difficulties with children during the period of self-isolation, and 4.5% indicated that they were annoyed because they could not cope with children. Consequently, 46.9% of parents experienced difficulties in interacting with their children during the period of self-isolation.

Several questions were related to the typical plots of interactions between parents and children in the family during the period of self-isolation. So, when asked "have you discussed the difficulties of self-isolation with other parents in social networks," 45.5% of respondents admitted that they did not discuss the difficulties of self-isolation with anyone, another 40.9% of parents discussed the difficulties of self-isolation with some of the parents, whose opinion for it is important to them, and 13.6% of parents noted that there is a group on social networks in which the difficulties of self-isolation were discussed. Overall, 54.5% of parents discussed the difficulties of self-isolation in social groups.

When asked about the most popular topics discussed with other parents in messengers, the answers were distributed as follows: 69.7% - the topic of kindergarten closure; 47% - questions about what to do with the child at home; 45.5% - the topic of restricting access to the street; 25.8% - the problem of lack of livelihood in the family; 16.7% - the topic of inability to work outside the home; 10.6% - the problem of closing a business due to a pandemic; 3% - questions of family conflicts that have become more frequent during the period of self-isolation.

To clarify the emotional state of children during the period of self-isolation, a question was proposed about how children perceived the restrictions associated with self-isolation. The answers to this question were distributed as

follows: 66.7%, i.e. most of the parents noted that the children asked for a walk; 43.9% answered that the children wanted to go to kindergarten; 40.9% said that the children enjoyed the opportunity to communicate with their parents; 36.4% - that children played a lot; and only 12.1% noted that the children were capricious. In general, the answers of 77.3% of parents can be interpreted as indicating a favorable emotional state of the children.

This conclusion is supported by the answers to questions regarding the child's sleep and appetite during the period of self-isolation. So, 71.2% of parents noted that the child's sleep practically did not change; 75.8% noted that the appetite had not changed. This confirms our assumption about the emotional well-being of most children during self-isolation.

In order to identify the typical patterns of behavior of children and adults in the family, which ensured a positive experience of the COVID-19 lockdown, the parents were asked about what the children were mainly doing at home during the period of self-isolation. The answers were distributed as follows: 86.4% of parents noted that their children watched cartoons; 63.6% indicated that children were running and raging; 57.6% - played story games; 40.9% of parents said they read to their children; 34.8% - played computer games; 22.7% of parents indicated that their children watched the lessons over the Internet.

When asked "did you try to captivate children with joint activities", the majority of parents, 78.8% noted that they occupied their children with drawing, 74.2% - joint cooking; 62.1% - joint work at home; 57.6% - learning what they can do themselves; 36, 4% - occupied children with joint application.

In the process of interviewing the parents, they clarified the time that the child spent watching TV, playing games and studying on a computer, tablet, laptop, phone. So, 50% of parents noted that this time increased than before self-isolation; 48.5% - the time remained the same in comparison with the period before self-isolation; and only 1.5% of parents noted that the time of such activities decreased in comparison with the period before self-isolation.

In order to identify the frequency of contacts between parents and employees of the preschool entity about receiving advice on how to keep the child busy at home, the question was added to the questionnaire: did the parents keep in touch with the employees of the kindergarten during the period of self-isolation. The majority of parents, 66.7%, answered that there was no need for contacts with kindergarten workers; 27.3% indicated that they sometimes turned to kindergarten workers for advice, recommendations on how to keep the child busy at home; at the same time, 6% of parents consulted with kindergarten workers. Total 33.3% of parents turned to kindergarten staff with varying degrees of intensity from "sometimes" to "often".

When asked how the period of self-isolation affected your family, 48.5% of parents noted that they were able to find activities that are interesting for the whole family; 40.9% noted that the family became more friendly. Practically 89.4% of parents indicated that the period of self-isolation

had a positive effect on the life of the family. However, 10.6% of respondents indicated that they argued a lot during this period.

#### 4. DISCUSSION

As a result of the study, an attempt was made to describe the characteristic children and parents behavioral manifestations during the period of self-isolation when the Covid-19 pandemic, which included an assessment of the emotional and physical well-being of children and adults in the family and the characteristic behavioral manifestations of parents and children in the family.

During the study, the following factors were identified that influenced the emotional state of parents and children during the period of self-isolation: parents digital literacy level; opportunities to discuss difficulties with parents and friends, for example, through social networks, etc.; the way of work of parents during the period of self-isolation; features of the perception of the fact of the COVID-19 pandemic.

The results of the study showed that the majority of parents are skilled Internet users and rate their level of digital literacy as high. Parents use social media every day. The most popular social networks for parents of families with preschoolers and living in the Primorsky Territory are WhatsApp and Instagram. Other messengers play a supporting role in the lives of families.

One of the typical parents behavioral manifestations is the discussion of the difficulties of self-isolation on social networks. Most of the parents noted that they discussed various topics in social groups, with friends and parents, in particular, the closure of the kindergarten, restrictions on the children to go outside, questions about what to do with the child during the period of self-isolation, as well as the closure of a business, and increased family conflicts. In general, it is possible to note the priority of "children's" topics in interfamily communication, while other issues are less significant for this communication. It is also obvious that parents have a certain emotional stress during the period of self-isolation for various reasons, but almost all of them are directly related to the topic of the COVID-19 lockdown.

According to our data, most parents did not work during the period of self-isolation, they stayed at home with their children, which had a positive effect on the emotional well-being of children. A number of parents were forced to work remotely, from home, others - worked outside the home and were forced to leave their children with relatives and neighbors. Working parents had to allocate time between family life, organizing children's activities and professional activities.

Similar results were obtained in a survey of the Center for the Study of Contemporary Childhood, Institute of Education, Higher School of Economics, which noted that parents were emotionally overloaded and have a lack of time to help children [8]. Foreign studies also state the emotional overload of parents, which is associated with

their desire to successfully combine childcare and professional duties during the period of self-isolation [10]. The tense emotional state of parents is confirmed in the course of our research. Many parents noted that they were afraid of a pandemic, they had difficulties in interacting with children during the period of self-isolation, some of them were annoyed because they could not cope with the children, there was not enough time to help children.

Unlike parent's one the emotional state of the majority of children, as shown by the results of the study, can be characterized as well-being. During the period of self-isolation, most children stayed with their parents and close relatives at home and "enjoyed" at the opportunity to interact with their parents. Therefore, comfortable conditions developed for them, which ensured a favorable emotional and physical state, which is confirmed by the fact that the sleep and appetite of children practically did not worsen during the period of self-isolation.

The positive impact of self-isolation on relationships with children was also noted in the results of a survey by the Public Opinion Foundation (Russia): parents "turned" to their children, began to spend more time with them [17].

One of the objectives of this study was to determine the typical patterns of behavior of children and adults in the family, which ensured a positive experience of the COVID-19 lockdown. According to the conclusions made in the works of authors from Turkey and Israel devoted to the problem of the psychological climate in families during time had the ability of parents to organize joint play activities with children [18,19].

Our data confirm this position, and also indicate that it is especially important for parents during this period to be ready to help children in their studies, accompanying children with preschool tasks completion. Similar results were also obtained in a survey conducted by the Center for the Study of Contemporary Childhood of the Institute of Education of the Higher School of Economics, which determined the forms of parental assistance to school-age children during distance learning. Helping children was carried out in the form of explanations when doing homework, parents acted as psychologists, took on the role of "technical support" [13].

According to our survey, with the direct support of their parents, children more often than in the period before self-isolation spent time watching television, playing games and exercising on a computer, tablet, laptop, phone. During the period of self-isolation, special conditions have developed to increase the level of digital literacy of children. Most of the children have acquired skills in digital technologies and have become "skilled users" of the Internet, as evidenced by the ease of finding the information they need, discovering interesting sites, and the ability to start a new game.

However, according to the results of the study, there was no increase in the time for communication of children with other children (real peers) through digital technologies during the period of self-isolation. In our opinion, the majority of preschoolers are not characterized by such a method of communication with real children, mediated by technical means. Children of preschool age need a direct partner, their communication can be mediated by joint

activities with other children, it is then that an occasion arises and a semantic field appears necessary for communication.

These data generally match with the estimates of other researchers, made, in particular, on the material of a survey of families in the United States [19]. In general, we share the opinion that if during the lockdown period there is an increase in the time of communication between children and peers through digital technologies, then this was necessarily facilitated by the active organizational role of an adult.

Our data allow us to conclude that, in general, during the period of self-isolation, the level of digital literacy increased not only for parents, but also for children. This was facilitated by the special conditions that developed during the period of self-isolation, in particular, the emergence of a child-adult community, the characteristic features of which are mutual interest, assistance and support by family members to each other, creation of favorable conditions for interaction, satisfaction with the results of joint activities.

The number of contacts between parents and employees of preschool entities did not increase during the period of self-isolation. One of the reasons, we think, is the lack of appropriate initiative on the part of preschool entities. In addition, modern parents, possessing the necessary level of digital literacy, can find the necessary information on the Internet, get it in the process of interacting with other parents and friends through social media.

As the results of our study showed, during self-isolation, families became united. According to the parents, the families became more friendly, managed to find interesting activities for all family members. This conclusion is consistent with the results of a survey conducted by the Public Opinion Foundation, which emphasizes that “families were able to unite their efforts in the face of confronting external problems” [17].

## 5. CONCLUSION

The study was pilot in nature and showed that parents and children of families living in the Primorsky Territory had such behaviors that ensured a positive experience of the COVID-19 lockdown. The most effective models include: discussion by parents of problems in social networks, positive interaction of parents with children, organization of joint activities of parents with children, including using digital technologies that ensure the cognitive development of preschoolers, organization of joint communication of children with real peers by means of digital technologies and etc. A special role is played by digital technologies, which are becoming the most important means of expanding the possibilities of interaction between parents and children with external actors.

These preliminary results can be seen as evidence of the importance of examining digital literacy of parents and children as a significant factor in positively experiencing the COVID-19 lockdown.

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