IMPLEMENTATION OF THE ONLINE TEACHING-LEARNING PROCESS DURING THE COVID-19 PANDEMIC IN PRE-SCHOOL EDUCATION

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Abstract
The period of online teaching was an alternative to the development of the teaching-learning process during the suspension of the courses with physical presence in the pandemic context. This study indicates the impact of the COVID-19 pandemic on pre-school education in Bihor County. The study also aimed to explore the perception of parents and teachers during the period of online teaching in pre-school education. From the analysis of the results, in pre-school education the family had the role of supporting the development of online activities in pre-school education. From the perspective of teachers, the pandemic context presented unexpected challenges and opportunities regarding the use of technology.

Keywords: early education; online education; parents' perspectives; teachers' perspectives

In March 2020, all areas of society, including education, suffered disruptions due to the COVID-19 pandemic. These challenges created by the pandemic have been a period of uncertainty, and have thus challenged efforts of adaptability and innovation and transformed education into an online teaching system in record time. Also, due to rapid changes in education, curricular changes have presented a priority with a focus on unique competences and skills. This crisis time has highlighted the need for digital literacy for students, parents and teachers. At the same time, the global challenges posed by the COVD-19 pandemic have exacerbated educational inequalities (Bozkurt et al., 2020; Lorente et al., 2020).

The changes caused by the COVID-19 pandemic have affected the entire education system, this transition creating greater difficulties in pre-school education than at other levels of education. First of all, the stages of development of a pre-school child did not correspond to the demands of online activities. Secondly, the use of digital tools could only be achieved with the support of the family. Similarly, Jones (2020) and Undheim (2022)

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found that family support, technology and internet access have been the dominant factors during COVID-19. As a result, the family had different roles in activities with children: on the one hand, it had the role of guiding and carrying out online activities with the pre-schooler, and on the other hand, it had the role of a psychologist, playground friend and similarly, parents (Yildiz et al., 2022).

Also, in the context of the COVID-19 pandemic, the effects on early education are considerable, compared to the situation of the other levels of education, due to the fact that at this age children cannot engage independently in online activities. The online learning process is a feature of inequalities in low-income families and contributes to an increase in the school dropout rate and social instability (World Bank, 2020; Darmody et al., 2020; Giusti, 2020). According to the results of several empirical studies on the effects of online teaching, in pre-school education it is found that due to social isolation, social-emotional development will face the most changes. Families of pre-school aged children are worried that children's behavioral and emotional problems may later affect the development of the ability to express emotions, their independence and even self-confidence (Egan et al., 2021).

With respect to the resilience of early childhood teachers to digital tools, corroborating digital and pedagogical competences with self-interest has been a foundational principle in changing the circumstances of online educational activities. However, participation in lifelong learning was viewed differently, and those who expressed the need for professional development in the use of digital tools were teachers with more experience in the education system. According to the study, the development of digital competences is regarded as supporting the pedagogical competences in the use of digital tools by all teachers (Lindeman et al., 2021). According to an analysis carried out by the World Bank, policies and investments to support learning are tailored to suit each country-specific situation. The World Bank together with UNICEF and UNESCO globally support education through financial resources and instruments (Azevedo et al., 2020). In consonance with the same study, in pre-school education, online learning opportunities were limited, and under these circumstances, 69% of pre-schoolers did not have access to the online learning system. This scenario includes children from rural areas, but also those whose families are exposed to poverty (UNICEF, 2020).

Presentation of a research on the topic of online teaching-learning
Methodological approach
In order to analyze the way in which the learning activity in pre-school education was carried out during the COVID-19 pandemic, we used the quantitative research method applied on a questionnaire-based survey.

The questionnaire assessed dimensions focused on general information, demographic data, how the teaching-learning process was carried out, the impact and effects of the pandemic on pre-school education. Different categories of respondents participated in the study, including parents of pre-school children, teachers and headteachers of pre-school level educational establishments.

Data analysis

The results of this study were analyzed using the SPSS program, through which we conducted a statistical analysis. As a first pillar, we analyzed the information on the total number of children, respectively the number of pre-school children in the family, the existence of a distinctly arranged space for conducting learning activities and online educational activities, income and material situation. With respect to the total number of children in the family, an average of 44% of families from rural areas and 52.1% from urban areas have two children, followed by those with one child - 34.9% from rural areas and 38.4% from urban areas, 3 children - 17% from rural areas and 8.7% from urban areas, 4 children - 2.1% from rural areas and 0.7% from urban areas. Also, in rural areas, 0.4% were families with 6 and 7 children. As for the distinct space designed for learning activities and online educational activities, over 85% of respondents (both in rural and urban areas) had a space corresponding to learning activities. At the same time, 28.7%, of families from rural areas, respectively 32.3% from urban areas, state that their place of residence has such a space to a very large extent. The results regarding the income at the household level illustrated that most of the participants in the study, namely 26.6% from the rural area and 29.2% from the urban area, earn on average between 4000-6000 RON/ month, followed by those with an average income of 2000-4000 RON with 34.4% from the rural area and 22.5% from the urban area.

The second pillar analyzed the way pre-school activities were conducted during the COVID-19 pandemic. The emphasis was placed on researching the following aspects: the internet connection and access to devices, the ways of organizing and carrying out the instructional-educational activities and last but not least, on the difficulties encountered during this period. Therefore, during the entire pandemic period, the internet access was reported as trouble-free. Similar to this result, over 95% of teachers in both rural and urban areas had confirmed this particular lack of difficulties.

In relation to the managerial activity throughout the period, the headteachers were in the position to carry out their activity at home or at school. On these grounds, working from the school unit was preferred by 40.7% headteachers in the rural area and 22.9% in the urban area, these results proving that working from home during the COVID-19 pandemic was chosen more in the urban area.

Regarding the applications used in the educational process during this period, all categories of respondents confirm that WhatsApp was the most commonly used application (45.9% parents in rural areas, respectively 56.3% in urban areas, 58.6% teachers in rural areas, respectively 78.9% in urban areas and 48.1% in rural areas, respectively 70.4% of urban areas). As for the most available allowing participation in online activities, the phone ranks first, with the following percentages: 98.3% in rural areas and 93.2% in urban areas for teachers and 92.2% in rural areas and 88.7% in urban areas for parents. At the same time, the laptop was the second device available with a percentage of over 85% among teachers in both rural and urban areas and 52.5% in rural areas, respectively 72.1% in urban areas among parents, followed by tablets with 26.6% in rural areas, 37.6% in urban areas and 39.7% in rural areas, respectively 34,2% urban area for teachers. It is remarkable that although the availability of devices can be identified, 37.3% of parents in rural areas and 29.6% of parents in urban areas asserted they did not participate in such activities during the pandemic.

Equally, according to the headteachers' statements, the devices available for the teaching-learning process were: the telephone, with a percentage of 95.2% regardless of the area of origin, followed by the laptop, with a percentage of 90.3% both rural and urban areas. The data indicates that for this category, the tablet was the least used device during the COVID-19 pandemic (32.3%).

However, with reference to the problems faced by responding parents during the COVID-19 pandemic, the internet connection created the most significant difficulties, followed by digital skills and the lack of a suitable device. Equivalently, for teachers, the technical problems with the device, respectively the lack of a suitable device for carrying out the activities, inhibited the educational process in a percentage of over 6% for both rural and urban. As for the category of headteachers, the second obstacle noted was represented by the technical standards of the platforms used, followed by the lack of a suitable device.

The third pillar analyzed the challenges generated by the pandemic context in the educational system. The indicators included in this dimension measure the manner of adaptability to online activities, the time and number of activities carried out / disseminated, the perception of the aspects that affect and influence children, but also the sources of support.

Based on the data obtained with respect to the adaptation of parents to online teaching, the results show that this period was identified as very difficult for 40.2% of respondents from rural areas and 30.5% from urban areas. At the same time, the teachers report that some of the most frequent difficulties were the feedback provided on the activities (12.1% the rural area, respectively 14.9% the urban area), followed by the monitoring of the

pace of solving the disseminated tasks (9.5% the rural area, respectively 10.5% the urban area).

When discussing the adversity of adaptation to online teaching, the headteachers stated they felt a mid-level difficulty during this period. Regarding the assessment of training levels for teachers, from the perspective of online teaching, the headteachers report that 7.4% teachers in rural areas are very well trained and 44.4% well trained, in contrast with the urban areas' percentages, where 28.6% are considered very well-trained teachers and 40% trained.

The degree of participation of pre-school children in online activities varies. Parents' responses show that the child's participation in online activities was between 80-100%, only for 33.2% respondents in rural areas and 29.7% in urban areas and between 0-20% for 13.9% in rural areas and 14.0% in urban areas.

Discussions

The analysis of the way in which the learning activity was conducted at the pre-school cycle during the COVID-19 pandemic in the school units in Bihor County highlighted the main aspects of carrying out educational activities in the pandemic context.

The first objective of the study aimed to capture aspects concerning the way in which the continuity of the education services was ensured during the COVID-19 pandemic, particularly focusing on children of pre-school age.

Following the analysis of the data, our results indicated that the most considerable impediments faced by the respondents with regard to online activities were the internet connection, the lack of digital skills and the right devices. The results obtained are in line with the results of another study conducted at national level IRES (2020), which points out that the lack of internet connection (15%) and of the right devices (28%) were the main problems with which children have been confronted during the pandemic. The following IRES survey, from 2021 IRES (2021), confirmed the persistence of these obstacles, concluding they were not fully addressed (4%).

We also found that in order to carry out the online teaching-learning process, parents and teachers requested the support of the headteachers. These results are similar to those of another study Vuorikari et al. (2020), according to which the rapid adaptation to the online environment was possible with support from schools.

At the same time, we analyzed teachers' perception of the impact of online teaching on pre-school children, and the answers revealed that social isolation was the major effect of the pandemic period followed by the long-time exposure in front of the screen. Furthermore, the results of other surveys on the impact of social isolation on the well-being of the child report that the social isolation of pre-school children during the pandemic

has generated sleep and anxiety problems. On the other hand, parents identified the lack of interaction as the main effect of this period (European Union, 2021). Similarly, a study by IRES established that the lack of interaction with children of the same age is a leading disadvantage of this period for children (IRES, 2021).

Another important aspect resulting from the present study refers to teachers' adaptability. The teachers adapted the curriculum by integrating technology in the activities' structure, being doubtless that their training was necessary in order to identify the most appropriate methods of completion. This result is in line with the conclusions of other international studies Doyle (2020); By Giusti (2020); Reimers and Schleicher (2020), which highlighted the need to train teachers with the purpose of improving the educational process.

The second objective of our research was to analyze the degree of involvement of parents during the development of educational activities in the online environment. In terms of parents adapting to activities during the pandemic, it has been more difficult in rural areas than in urban areas. The results regarding the time spent with pre-schoolers online show that only about half of the parents were actively involved in this process. Also, the mother was the one supporting the children more during this period. At the same time, the main factors that influenced the children's results were the parent's job and the lack of skills or digital devices. Based on the collected data, it can be concluded that there have been situations in which the parents have contacted the teachers or headteachers daily to communicate the problems they were facing and which required support during that period. In another study on the impact of the COVID-19 pandemic, Eurochild (2020) this result was confirmed, explaining that even if the authorities supported children from vulnerable families with technological equipment, access to online education was still quite limited.

Another finding underlined the fear of parents about certain aspects that may affect the children. As a result, the lack of social interaction with children and teachers was the most significant concern of parents, followed by the effect of the long time spent in front of the screen. This finding is in line with another study confirming that the activities of kindergarten children during the pandemic have affected the emotional state of the child (European Union, 2021). A separate study Dong et al. (2020), explained that the family played the leading role in managing child's activities to avoid screen addiction, social isolation and behavioral problems.

Relying upon the results of our research, parents and headteachers believe that support services for children with special educational needs have been significantly affected during the COVID-19 pandemic. As UNICEF also claims, services for children with special educational needs were among the most affected educational services (UNICEF, 2020).

The third objective of our study relates to the analysis of the impact of socio-economic status of the family /or parents on the access to educational services addressed during the pandemic to children of pre-school age.

First of all, the social status of the family from which the child originates is the most important component for ensuring the child's access to education. The result is consistent with the results of other studies (Andrew et al., 2020; Cordini & De Angelis, 2021; Sari et al. 2021), validating that socio-economic differences during the COVID-19 pandemic have caused gaps with long-lasting consequences. Also, another study, conducted by UNICEF, reiterated that the access to activities in a pandemic context depends on the socio-economic status of the family (UNICEF, 2020).

Another relevant aspect pursued in this study concerned housing conditions. It has been concluded that most of the families participating in the study own a place of residence with three rooms.

Although 85% of the parents participating in the study from both rural and urban areas report that they own a space arranged for carrying out child's activities, when it comes to online activities, the results coincide with an identical percentage of 38.9% in the rural area, respectively in the urban area. These results are most likely to indicate the availability of digital devices necessary for these activities. The social status of the family, as the main driver of educational disparities during the COVID-19 pandemic, is also confirmed in other studies (Blundell et al., 2021; Darmody et al., 2021). The same studies established that the access to resources, as well as non-existent or overcrowded space of the home, contribute to reducing the overall results of activities.

From the perspective of the level of education completed, differences between rural and urban areas are easily observed. While in urban areas postgraduate and university studies are most frequently ranked on the first places, in rural areas high school studies with baccalaureate predominate. According to other studies, the level of family's education has an impact on the way online educational activities are carried out, leading to long-lasting consequences (Andrew et al. 2020; Sari et al., 2021).

Study limits

Since this study was conducted at the level of Bihor County, the results cannot be generalized. Also, it should be noted that several localities from the Bihor County are missing from the study sample.

Conclusions

The conclusions of the study are dependent on the results of the quantitative research presented above and equally, on the knowledge of the theoretical and empirical aspects of measuring the impact of COVID-19 on education. They indicate how the educational activities were carried out at pre-school level during the COVID-19 pandemic in the schools in Bihor

County. According to the results, it is determined that access to the internet connection and digital devices allowed the educational activities to take place during the COVID-19 pandemic. As most families had only one pre-school child in the home, factors that influenced the time and way of carrying out pre-school child's activities were the parents' workplace or the existence of a sibling at school as well.

With respect to the effects caused by this change, it is to be noted that the socialization of pre-school has been replaced by social isolation, long time exposure in front of the screen, and an overall lack of interaction with other children. Therefore, this period has affected children and parents alike, with long-term effects. Similar to other studies, the findings of the research proved the importance of the family during this period. It was found that the family was the most significant support in terms of the online educational process. Nonetheless, in terms of supporting children's online activities, it is the mother who spends more time in assisting with the learning activities.

The results of our study provide valuable evidence on the fact that pre-school education activities were carried out online by using platforms or applications proposed by school institutions during the COVID-19 pandemic. Therefore, the professional training of teachers was a priority in order to cope with contemporary changes.

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