THE SITUATION OF ONLINE PRESCHOOL "LEARNING" FROM EARLY CHILDHOOD TEACHERS' PERSPECTIVE

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Abstract: The closure of educational institutions in the context of the COVID-19 pandemic prompted early childhood teachers to review educational practices used in early childhood education. The present study provides a picture of the home education period from the point of view of early childhood teachers, reflecting on how different elements of the preschoolers' digital diet could prevail during the aforementioned period. Research data was collected via questionnaires (N=423). Data was collected from early childhood teachers who teach in Hungarian. Research results show a strong tendency in early childhood teachers to adapt to the needs of parents and children, and at the same time, a strong correlation between the use of online platforms and the teachers' level of digital skills. The early childhood teachers' adaptive and open-minded approach to the situation is also enhanced by the rich repository of elements that are transferable to offline education.

Key words: preschool learning, online and digital learning, Covid 19 pandemic period, kindergarten closure, preschool teacher

1. Introduction and theoretical background

The period following March 2020 forced early childhood teachers to reconsider their view on, and use of digital devices in preschool education. The answers provided by practicing early childhood teachers while adapting to the state of emergency (home education) might serve as a starting point. And so might the reflections they formulate following this period. The individual or small community practices, which develop as a response to challenges to the very existence of society, and would not have developed unless the community learned how to efficiently face existential threats are considered instances of bottom up innovation (Forray-Kozma, 2021). Early childhood teachers had to face countless dilemmas in this period, such as how to define the online "learning" of preschoolers: how much time children should spend in front of a digital device, what content to use and how to harmonize online teaching with the psychophysiological characteristics and developmental needs of this age group. Both teachers and children experienced the closing of preschool institutions due to the pandemic in a similar way. They felt as in the Hungarian folktale entitled "The Wise Lass" in which something existed and didn't exist at the same time. Early childhood teachers sent learning materials for the children, they even met on different video chat platforms, however somehow it did not feel right, mostly due to the lack of physical presence. As the wise lass tried to find an answer to the king's riddle (in our case the riddle was "formulated" by the pandemic) early childhood teachers also strived to develop and implement the most optimal practice adapted to the situation. Trying to find the solution has led to the development of many practices. "Such challenges give rise to alternative responses formulated by alternative actors. One type of response is based on previous experiences, expertise and existing skills. The other type, however, is novel, especially if the challenge is also new: we haven't faced such a challenge before. Standard procedure will no longer do in such cases" (Forray – Kozma, 2021, 37).

The current study sets out to explore the diverse alternative solutions developed as a response to the pandemic situation; it also seeks to present the characteristics of the educational activity and practices undertaken by early childhood teachers during the home education period. It also tries to define home "learning" in the case of preschoolers, to investigate the extent to which it meets the age group specific

requirements of ICT usage, as well as, to look into how this period is considered from the point of view of successful development and knowledge and experience acquisition. We trust that after the online "learning" period has ended and preschool institutions reopen, we will not find ourselves in the same situation as the king in the earlier referenced Hungarian folk tale, who received a dove between two sieves and when he opened the sieves the dove flew away. We hope that the experience and knowledge acquired in this period will not vanish in thin air.

The use of ICT tools in early childhood education raises a number of questions including feasibility, the need for appropriate technical and pedagogical skills, efficiency and negative results. There are pro and con arguments as well. However, these are mostly subjective opinions as there are very few comprehensive investigations in the ICT use of children aged under seven (Nikolopoulou, in Fáyné, Hódi, Kiss, 2016). It is undebatable, however, that being forced into digital education teachers did not have the time to consider which side to take. There was not much room for informed choices to be made in this Procrustean bed.

The prevalance of ICT tools in education is not a new phenomenon. In early childhood education practices, however, it was considered a rarity, even though experts raised awareness in 2003 (IMB Conference, Brussels) that the most important task in the upcoming years would be to convince early childhood teachers to freshen up early childhood education with the introduction of ICT tools. To achieve this, however "early childhood teachers must have adequate digital literacy, they must know how and when to use these tools efficiently in order to develop personal, social and emotional skills, as well as communication, linguistic, mathematical, physical and creative skills" (Reding in Fáyné, Hódi, Kiss, 2016, 91). The message conveyed is that with the appropriate pedagogical digital competences, ICT tools can be used in the development of preschoolers. The secret lies in the proportions! In our search for the right proportions, we came across the term *digital diet* (Kennedy, Hupert, 2021), which we deemed well suited for the clarification of our approach: digital tools can be used as means of development, however due attention has to be paid to time frames and contents employed. Yoo-Young (2020) pointed out that experts in children's digital media consumption agree that content is the most important aspect in the case of preschoolers. As long as the digital content corresponds to the age group, it serves educational and entertainment purposes, its use will not have a negative impact on personality development. The researcher also draws attention to the fact that the content should harmonize with the time factor as well since anything that exceeds the appropriate amount will overwhelm the children. In the light of this, the question arises how much time should be spent online. According to the Step by Step Centre for Education and Professional Development (2020) children aged between 2 and 5 should not spend more than an hour in front of a screen. This should be done under the supervision of a parent with whom they can discuss what they had seen. It is also recommended that parents encourage the participation of children in the online activities proposed by the early childhood teachers and that such activities should not exceed 2-3 times a week. Hódi, Tóth, B. Németh and Fáyné Dombi (2019) discuss the recommendations of the American Academy of Pediatrics (AAP) regarding screen time, according to which children aged 2 to 5 should get an hour or less of screen time per day in the presence of parents, while the screen time and content consumption of children aged 6 and older should be restricted. It is important to point out that during the home education period, screen time did not only mean the time spent with the teachers but also the time required to carry out the tasks proposed by the teacher (or in some cases parents allowed children to use the tools for other purposes, which probably exceeded the optimal timeframe prescribed by the digital diet). When considering the optimal amount of screen time, one should also focus on the relationship between the activity and the content. Konok and Peres (2021) claim that the content of games is an important factor but a distinction should be made between games with educational purposes and those which serve mere entertainment purposes and often overstimulate children. Educational games can enhance children's vocabulary, can facilitate learning a foreign language or develop their mathematical skills. There are a number of studies focusing on the ideal amount of screen time, the use of ICT tools and the positive and negative effects of these. According to some of these studies, the fast rate of technological development provides new ways of learning and development, while others emphasize the dangers of harmful content available through digital tools. It is assumed that during the home learning period, early childhood teachers carefully selected the

content and even recommended that parents should act in a similar way, which -we believe- has significantly decreased the risk of inappropriate content.

Fáyné Dombi, Hódi, Kiss (2016) point out that we cannot overlook the use of ICT tools in early childhood education since they are part of our everyday life and they can also be used efficiently in children's development. These tools serve a double purpose: on one hand they can be entertaining, on the other hand, however, they can also serve educational purposes (Fáyné, Hódi, Kiss, 2016) as experienced in online "learning" during the pandemic.

The use of ICTs can influence the quality of educational practices in three ways: on one hand it can *promote* the existing pedagogical practices (not changing the curriculum but increasing efficiency), it can *enrich* it (bringing changes to the curriculum which could be carried out without ICTs as well), or it can *modify* it, which means changes that could not have been implemented without this novel approach (Twining in Fáyné, Hódi, Kiss, 2016). The experts quoted before consider that given the infrastructure and the type of activities characteristic of early childhood education it is the enriching version that is feasible in preschool education. However, as experience shows, during the home education period, due to external pressure, early childhood education has undergone the *modification* process, without which early childhood education would have come to a complete halt. The modification process was, however made more difficult by the fact that early childhood teachers are not at the same level when it comes to digital competences (the level of digital literacy determines whether they can use more advanced tools). In 2015, 8% of early childhood teachers had some form of IT qualifications but only 3% used the internet for educational purposes (Fáyné, Hódi, Kiss, 2016). This shows that the digital competences of early childhood teachers have not been developed. For some, the mere use of tools posed problems. At the same time, the proficient use of digital tools also requires knowledge of digital pedagogy. Compulsory home education came unexpectedly and found most of the teachers unprepared (Nagy, 2020). 2018 TALIS results show that in Romania (CNEE,2020) almost half of the teachers (49.8%) consider that the range of options for digital tools that could be used in schools is unsatisfactory (the EU average is 28%!) and according to 36.2% the internet access is also inefficient. 22% of the teachers consider that there is a need for training courses improving digital competences. A positive result of the survey is that the proportion of teachers using ICTs in the education process has increased by 30 points. This scenario might have improved slightly by the spring of 2020, however, we believe that in the period when preschool educational institutions were closed the majority of early childhood teachers sought instructions and aid in forming their perspective and in practical implementations as well. The *guidelines published by the Ministry* (2020) point out the following in respect to the different school year: educational activities should be carried out in accordance with the curriculum, with the possibility of physical distancing in mind; the amount of group interactions and shared materials should be reduced; activities, if possible, should be carried out in the open; hygiene practices should be requested (sneezing into elbow, frequent handwashing, etc.). These regulations mostly apply in the situation when educational institutions still operate, though under stricter conditions. When the so called scenario III. is in effect, however, children are not allowed to attend educational institutions, so this is when online "learning" comes into force, in most cases, since for this scenario the guidelines prescribe small group interactions online targeting those segments of the curriculum which require the presence of the early childhood teachers. Different tools for virtual communication are recommended, in particular WhatsApp and Messenger or other applications that provide video chat options. The implementation requires the assistance of parents. It also draws attention to planning activities which can be carried out outside the walls of the institutions, on the level of parent-child interaction. For a more efficient implementation, recommendations are also made regarding the different ways of interaction: on one hand teachers should collaborate in terms of planning activities and creating teaching materials, on the other hand they should interact with parents at least once a week. The guidelines particularly emphasize that the interaction of early childhood teachers with the parents and the children should by no means become a source of stress and should not result in children being overburdened.

In order to avoid this one should consider the methodological principles and management strategies of early childhood digital pedagogy focusing on the questions below (see Table 1.):

Table 1. *The Theoretical Principles of Early Childhood Digital Pedagogy (Adapted from: Nagy, 2020)*

What?	Programmes, applications, interactive teaching materials developed for children 3 to 7 years old, Web. 2.0 applications.
Why?	Cognitive abilities, psychological functions, developing socialization, creativity, creative abilities, experiencing art
How?	Iin all cases adapted to children's individual needs, promoting individual developmental pathways
When?	Adapted to the preschool agenda
How long?	5 to 30 minutes, depending on age and abilities
Who with?	Early childhood teachers/parent, peers

At the time of distance education, it is essential (Felsmann, 2020) that early childhood teachers - though feeling resentment towards online education or creating home assignment - adopt an attitude of openness towards the preschoolers and present the activities in this special educational space in an attractive and pleasant way (McDonald, 2020). In other words, they should adopt a positive attitude and show pedagogical optimism.

2. Research methodology

The aim of the empirical dimension of the present research is to present the activities and practices implemented by early childhood teachers during the online "learning" period, when preschool educational institutions were closed.

Our global goal is to present a picture of the educational situation in Hungarian preschool educational institutions in Romania during the COVID 19 period and to identify valuable elements, which might prove advantageous in offline education as well. Consequently, the main focus of the present research is to investigate digital education practices in preschool education. We employed two methods in our study based on a questionnaire devised by us. Beyond the demographic data, the questionnaire can be divided in two subunits. One of the subunits focuses on the practices and details of online education: mostly investigating the use of online platforms, what kind of platforms, how, for how long and how frequently they were used; and also examining whether curriculum requirements were met and which developmental areas were more in focus. The other subunit asks for reflexions on the challenges posed by home education and the way these challenges surfaced: did they surface in adopting attitudes and developing contents -deciding on preschoolers' screen time and what this should entail -or rather in the technical implementation, i.e., what platform to use, at what time of the day, how to harmonize parents' demands, etc. Data was analysed using SPSS Statistics (frequency, mean, chi-square, analysis of variance, correlation, factor analysis).

It was hypothesized that the pandemic period compelled early childhood teachers to adapt preschool educational practices to the online space, which posed a number of challenges.

The study was conducted on Hungarian early childhood teachers in Romania. A total of 423 early childhood teachers were involved in the study (18.2% of the study population -2324 individuals). The average age is 40.3.
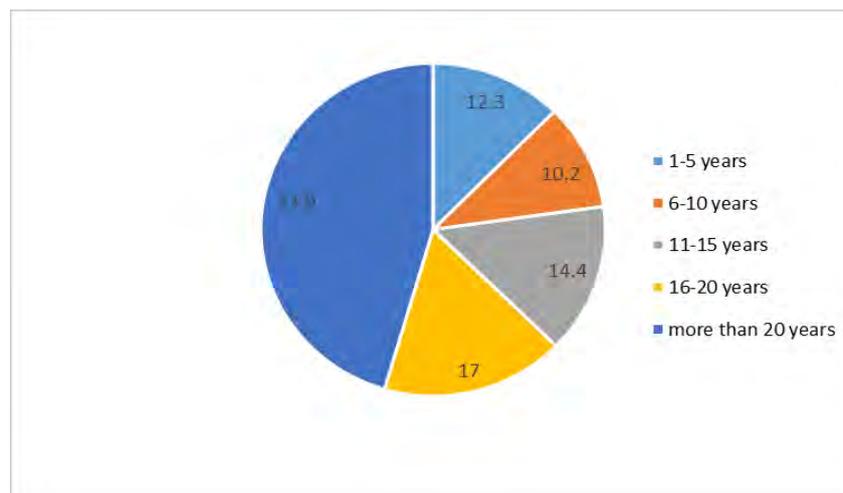
Figure 1. *The professional experience of the sample - % (N=423)*

As regards their professional experience (see Figure 1.), almost half of the sample has more than 20 years of experience, and all age groups were represented. In terms of settlement distribution 57.4% of the sample work in an urban area, while 42.6% work in a rural educational institution.

Online education practices

When investigating the characteristics of preschool educational practices during the pandemic situation, those educational activities were considered that early childhood teachers proposed to preschoolers directly (or indirectly, via parents).

Preschool educational institutions in Romania were closed on several occasions in the March 2020 to April 2021 period. Research results show that teachers contacted children mostly indirectly, by sending out various teaching materials to the parents. As illustrated by the figure 2, on a 1 to 5 scale, this approach is represented by a 4.2 mean. Online meetings are represented by a 3 mean (this becoming the dominant form of communication and education during the autumn closure). Hybrid education was the least typical though there were some teachers who in addition to the short online meetings also distributed tasks to be carried out by the children. Overall results show that early childhood teachers found it essential to reach out to children and families in one way or another. Our findings match the results of Bakonyi, Kosztel and Villányi's study (2020).
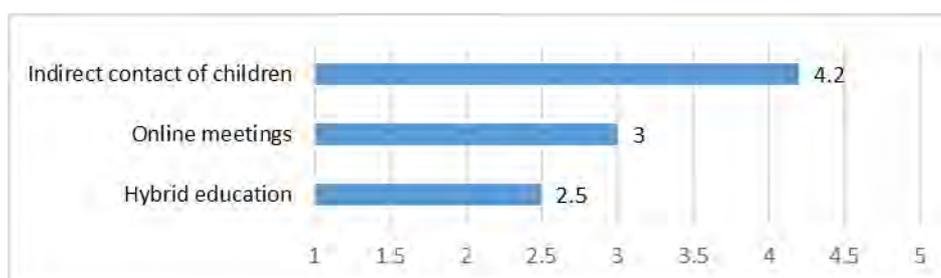

Figure 2. *Ways of meeting preschoolers during home education*

When it comes to the frequency of online meetings (see Figure 3.), the outcomes are rather varied: the majority of early childhood teachers found it important to meet the children, even if online, at least once a week; one fourth of the teachers met them twice or three times a week, while almost one third met the children daily. The pie chart below also shows that one fourth of the early childhood teachers did not hold online meetings at all, or just very rarely.

Activities were distributed in various ways among colleagues. Two alternative solutions were chosen most frequently: either both teachers were present (*We were both present at the online, Zoom*

meetings, but we continued alternating weeks as we had done before. One of us prepared the materials one week, the other one the week after that.) or both teachers held activities in their own shifts, every morning or every afternoon (*The colleague responsible for morning shifts held activities in the morning, while the other one in the afternoon*). Other solutions were also found, for instance, the morning shift teacher was present online, while the afternoon shift teacher prepared home assignements (*The morning shift teacher held the online meetings according to the weekly topic, the afternoon shift teacher helped out with choosing tasks/ideas*). Answers also implied that teachers' digital literacy played a decisive role in which teacher to hold the online meetings, in particular at the beginning, during the spring closure (*At the beginning I worked alone. My colleague did not know anything about Zoom. Later we alternated weeks...*). Answers of the type have a predictive nature in terms of the effects of online education on professional development.
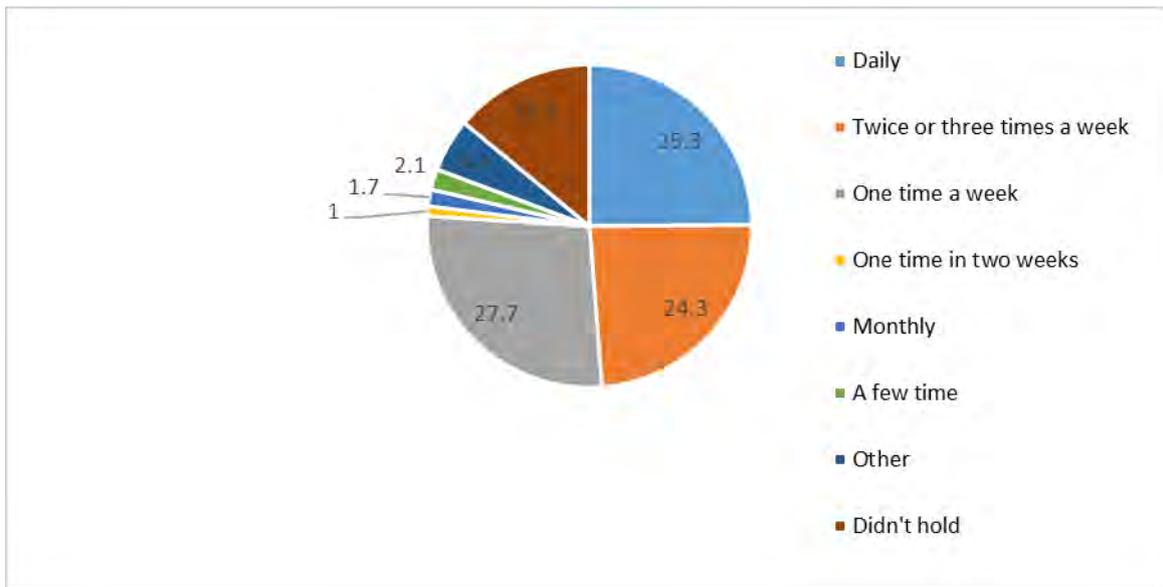

Figure 3. *The frequency of online meetings - % (N=423)*

The reasons for not holding online meetings are rather varied (see Figure 4.). However, the most typical ones were not the lack of technical requirements - both on the part of preschoolers and their teachers - or insufficiencies in digital skills, but most often, choices were motivated by educational convictions (statistically significant difference: t=-8,62153; p<.01). It cannot go unnoticed, however, that one of the reasons enumerated is teachers' lack of digital knowledge represented by a 2 mean, which is an important finding as regards the organization of training courses.

Figure 4. *Reasons for not holding online meetings*

The pandemic situation raised many dilemmas with respect to the educational and developmental activities of preschoolers. While in the case of school children it was not questionable whether

activities proposed by the teacher were compulsory or not, in the case of preschoolers a more tactful and considerate attitude was adopted. Research results show that the overwhelming majority of early childhood teachers, i.e., 82% proposed activities and left the decision up to parents. What is more, 15.2% of the respondents entrusted the children with the decision whether to join the online activities or not. Compulsory activities represent a very low proportion, 2.8%. In their investigation of this issue, Bakonyi, Kosztel and Villányi (2020) found very similar results.

As regards the time of the online meetings (see Figure 5.), almost half of the early childhood teachers showed great flexibility. They held the meetings at different times, adapting to the parents' timetable and needs. On the other hand, many teachers considered it important to have the meetings in the morning hours and asked parents to comply with this aspect.
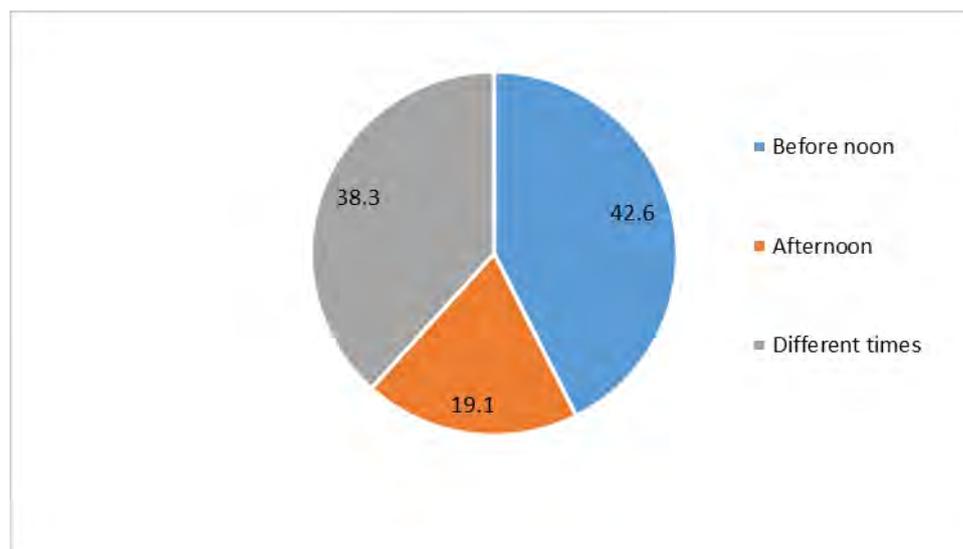

Figure 5. *Time of the day for online meetings % (N=423)*

As to the duration of the meetings, more than half of the research participants planed 30-40 minutes long sessions and implemented them online, not overlooking the motivatability and attention span of preschoolers, and the average timeframe for traditional activities. A number of early childhood teachers (35.7%) considered that screen time should not exceed half an hour so they held sessions up to 30 minutes. A few early childhood teachers attempted longer sessions that lasted even up to 1 hour or longer. To what extent this could be declared compatible with the developmental psychology and ergonomic requirements of activities at this particular age is a different question.

When deciding on the length of the sessions, teachers' professional discretion and convictions played an equally important role as children's needs, which teachers tried to meet. Represented by a lower mean, parents' and colleagues' opinion on the duration of sessions was a similarly important factor (see Figure 6.). Recommendations from "above", from heads of institutions or inspectors weighed the least. The professional independence of teachers is highlighted by the fact that teachers' own discretion and professional opinion represents a significantly higher value in decision-making than consulting higher authorities and the recommendations made by these (t=-20.90511, p< .00001). The question arises whether the early childhood teachers did not wish to take heed of these recommendations, or whether there were no recommendations made that could have served as a starting point (according to the interview data, the second case was more typical, thus teachers had no other choice but make decisions on their own).
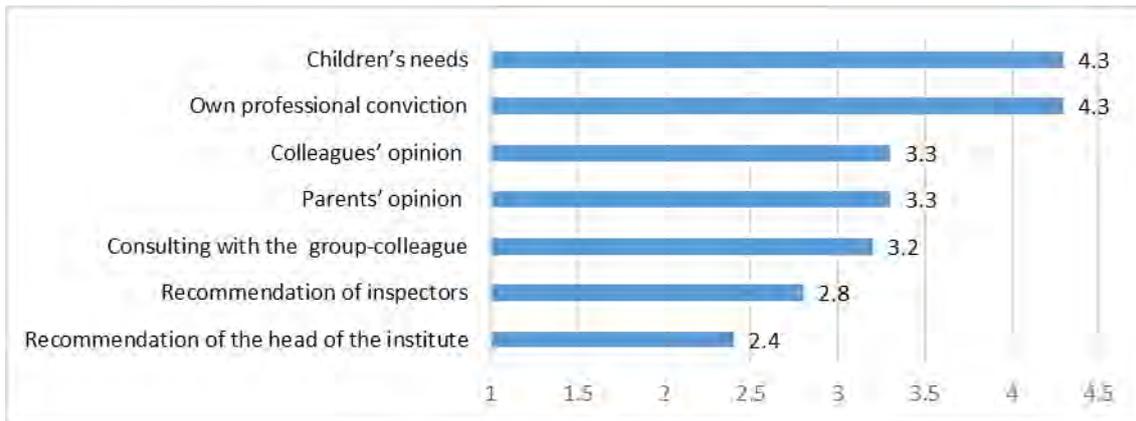
Figure 6. *Factors influencing the duration of online meetings*

The mean of preschoolers' attitude towards online "learning" is 3.4 (on a scale of 1 to 5), which shows that though they are still far from total implication, they considered the meetings a positive experience (standard deviation: 0.97912).

Another important question was early childhood teachers' observations on the accessibility of the activities to preschoolers. The 7th figure shows that there were respondents, though at a low percentage, 6.1%, who reported that not even 10 % of the children took part in these activities. On the other hand, almost half of the early childhood teachers found that more than half of the children can be engaged online as well. 22.4% of the respondents reached less than one fourth of the children. This is a high percentage as it suggests that almost one fourth of the early childhood teachers did not reach the preschoolers or reached a very low percentage.
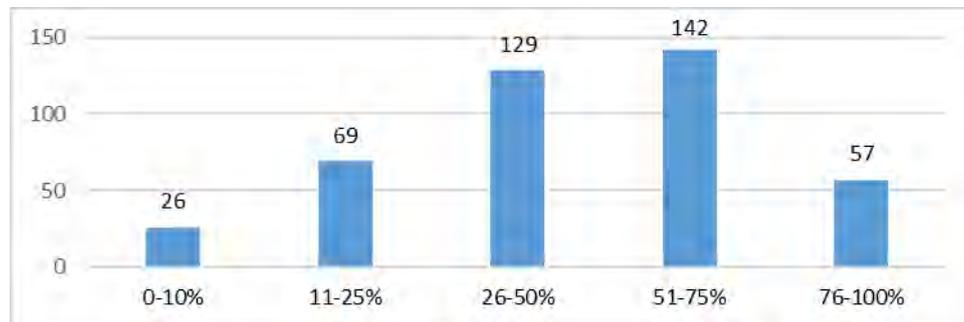

Figure 7. *Preschoolers' participation rates at online meetings (N=423)*

The next section focuses on platforms and applications used for online "learning". The 8th figure shows that teachers employed different meeting platforms. During the autumn closure of educational institutions steps were taken on an institutional level as well. Google Meet was made accessible and functional and was used by a majority (59%). Another option represented in higher percentage was Zoom (17.2%) online meetings. Facebook/Messenger groups were also a popular choice (15.3%) for meetings and sending out tasks. Of course, there were some other applications represented as well, to a lesser extent. Previous research underlined mostly the use of Facebook (groups) (Felsmann, 2020). The use of Google Meet became popular during the autumn closure when institutions also took action in order to facilitate the communication between the teachers, children and parents.
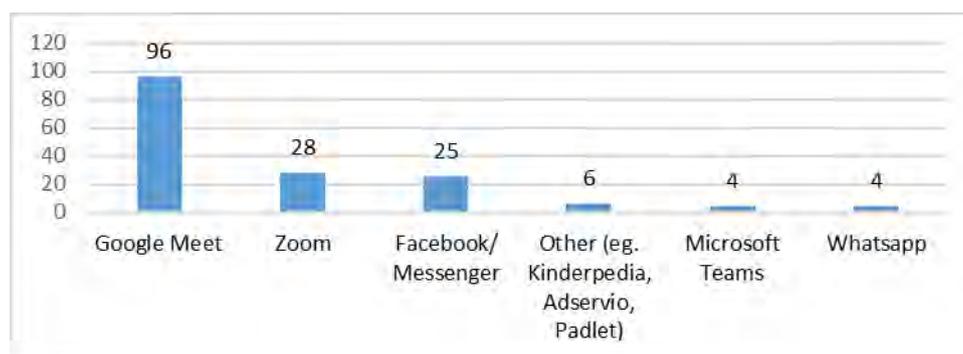
Figure 8. *Online meeting platforms*

We also wanted to find out whether teachers held the online activities with the whole group at the same time, or whether they considered that working in smaller groups is more efficient. Results show that almost half of the teachers (46.6%) worked with the whole group at the same time. Teachers who worked with smaller groups in order to improve efficiency or to meet parents' demands can be categorized as follows: 21% worked with half of the group, while 29.5% worked with 4-5 individuals at a time.

A very wide range of applications have been used to carry out online activities. The most frequently used ones, with the highest score are Wordwall, Padlet and PowerPoint. The egyszervolt.hu application, accessible for the age group also turned out to be popular. Results highlight the use of applications that are meant to stimulate preschoolers' engagement and participation and allow a greater degree of autonomy (Wordwall, egyszervolt, LearningApps). Applications which facilitate illustration and planning were also used. These are not age group specific and are not meant to be used by the preschoolers on their own. The fact that some of the teachers tried to used previously unfamiliar applications, such as Genially, Sutori, Nearpod, etc. serves as evidence for their open-minded approach. The answers provided to open questions also show that teachers have tested other applications as well, such as Wakelet, Jigsawplanet, Canva, BookCreator, Qiuzzlet, audio books and Prezi. How frequently the applications were used was influenced by the teachers' digital competences as well. The higher-level the competences, the more frequently the applications were used. An exception was the egyszervolt.hu application, in the case of which we did not find a correlation between teachers' digital competences and the frequency of use (see Table 2.).

Table 2. *Applications Used for Online "Learning" and Correlations with Early Childhood Teachers' Digital Competences (*=significant)*

Application	Mean	Correlations with the level of digital competences - at the beginning of the online period Significance –ANOVA	Correlations with the level of digital competences - at data collection Significance -ANOVA
wordwall	3,7	0,048*	0,001**
Learning apps	2,42	0,007**	0,000**
Egyszervolt.hu	3,06	0,312	0,641
nearpod	1,26	0,067	0,020*
Powerpoint	3,20	0,000**	0,000**
Padlet	3,43	0,286	0,000**
Genially	1,65	0,657	0,036*
Sutori	1,55	0,043*	0,003**

Another question raised was whether teachers preferred teaching materials designed by them or whether they looked for ready-made materials. Both methods are feasible (see Figure 9.), however we believe that the materials prepared by the teachers could provide greater consistency between the group's needs and the activities proposed. 52.2% of the teachers tried to use their own materials in

more than half of the instances and there were also teachers who hardly ever design tasks for their preschoolers. Statistical results show that there is a strong correlation (p<0.000***) between the level of digital competences and designing own teaching materials. The higher the early childhood teachers rate their digital competences (either during the online period or at data collection) the more likely they are to use materials designed by them.
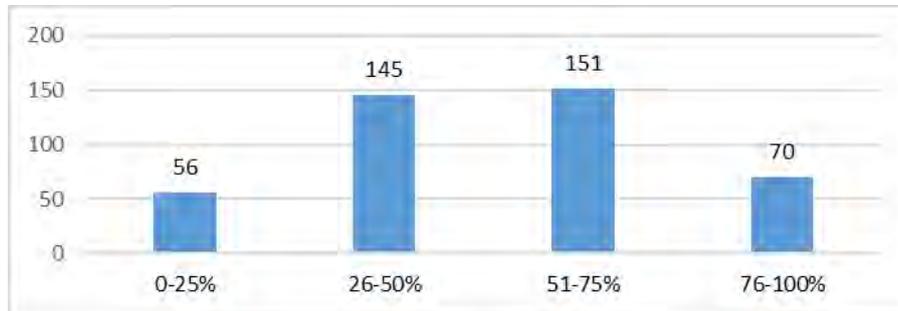

Figure 9. *The percentage of teaching materials designed by the teachers (N=423)*

According to our findings, the implementation of the online activities and the nature of these are primarily influenced by the availability of digital tools and the teachers' digital knowledge, both with a high mean (4.3, 4.2). Another high mean represents children's workload (3.9). Good practices in the home country, national regulations and parents' expectations were equally significant, however they are represented by significantly lower means (t=15.70898, p < .00001) than the two factors previously pointed out. The language of instruction and minority recommendations played a less significant role (see Figure 10.). Interestingly, the colleague's influence was also less significant, though one would expect that in day-care educational institutions there is a significant cooperation between the two early childhood teachers (and the majority of our respondents work in day-care institutions – 61.7%). Felsmann's findings (2020) show colleagues to have a more prominent role in supporting each other. This might be attributed to the fact that once the insecurities resulting from the first closure diminished, early childhood teachers' autonomous decision-making became more firm.
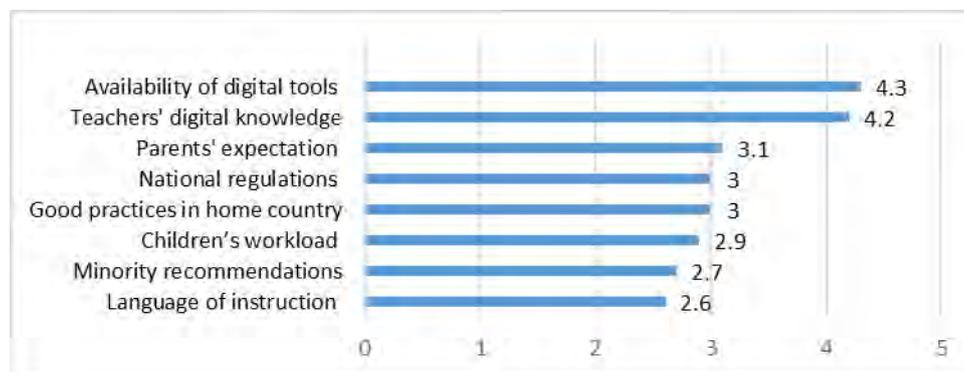

Figure 10. *Factors influencing online education*

Factor analysis divides respondents into four large groups based on the factors influencing online education as shown in the 3rd table. The group of *rule-followers* consists of teachers who consider national regulations and minority recommendations equally important, and whose educational practices are influenced by the good practices of the home country and parents' expectations. This factor shows that there is a layer or early childhood teachers who find it essential to comply with regulations. This is why there is a need for more specific recommendations from experts, which would facilitate the work of teachers belonging to this group. The second group is the *digital* group, which considers that the efficiency of online education lies in the availability of digital tools, digital knowledge (using tools and pedagogical adaptation) and the appropriate workload for children. This approach harmonizes well with the digital diet, which places emphasis on carefully selecting the pedagogical elements suitable for the digital space, as well as taking into account children's needs

when implementing educational activities. Teachers belonging to the third group consider that their colleague, their *partner* plays an essential role in ensuring the efficiency of online education. Interestingly, they would not extend this cooperation to include the parents as well. They believe that the efficiency lies in a cooperation between professionals. Teachers belonging to this group give a minimum importance to rule following. The fourth group, the *minority*, considers the language of instruction as a determining factor influencing the efficiency of online education.

Table 3. *The Factors Influencing Online Education (Principal Component Analysis, KMO=0.802; CM=74.5%)*

	FACTORS			
	Rule-follower	Digital	Partner	Minority
National regulations	.708	-.399	.102	-.267
Minority recommendations	.758	-.507	-.078	-.107
Home country good practices	.740	-.349	-.154	-.118
Parents' expectations	.672	.170	-.163	-.249
Teacher's digital knowledge	.588	.544	.175	-.034
Availability of digital tools	.621	.415	.207	-.108
Children's workload	.607	.527	.-348	.099
Colleague	.478	-.096	.746	.307
Language of instruction	.571	-.146	-.291	.709

We also investigated how the early childhood teachers who did not take part in online "learning" tried to implement the educational activity. During the online education period most of the early childhood teachers (3.9 mean) sent out tasks and ideas for activities to be carried out in addition to the online sessions. These were of various nature. Most of them did not require the use of digital tools and children could complete them on their own. Tasks which required parental help were represented by a 3.7 mean. Online, digital tasks were the least common (see Figure 11.). This attitude is in accord with the approach that preschoolers should not be tied to the screen.
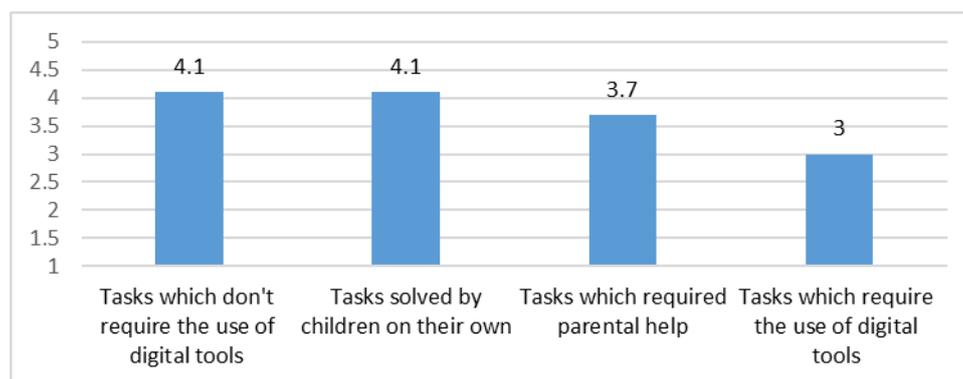

Figure 11. *The nature of home assignments and ideas for activities, along digital and social parameters*

Concrete activities proposed by the teachers were to a high degree activity involving little or much movement (*building a birdhouse, making a snowman, sorting seeds, etc.*). These were mostly related to the topics covered online (e.g. *rotate the wheel and jump as many times as the number shows; go outside and find as many animate and inanimate objects represented on the cards as possible; when learning about the human body, I asked them to lie down on the floor and ask their parents, or siblings to place blocks around them then get up and check the contour of their body, etc.*). There were

teachers who instructed the children on who they are to do the activity with (e.g. *baking gingerbread with mom, sledging with dad, etc.*).

Professional experience gained during online education reached a 3.5 mean. Teachers consider that they have acquired transferable skills. This can be deemed a positive aspect as many of the respondents identified a learning opportunity in this new situation. "New responses to challenges born amidst such community situations will remain with us even after the challenges have passed, and will change our lives. These are called innovations and in order to distinguish them from top-down reforms, they are called social innovations" (Forray-Kozma, 2021, 46). We have unmistakably witnessed educational innovations on the part of early childhood teachers and it has also become clear which element are the once that "remain", i.e., will be of value in the future.

Teachers consider the digital contents they have familiarizes themselves with the most valuable knowledge they can transfer to offline education (see Figure 12.) and they also claim that the acquired digital skills will facilitate their professional activity in the future (3.9; 3.9). The distance education experience made early childhood teachers more convinced and/or aware of the importance of interacting with partners (parents, colleagues) (3.2; 3.5) and it brought to light different alternative ways to achieve this. From an administrative point of view, recording children's work and planning activities turned out to be an asset that can also be drawn on (3.3; 3.4).   According to our observations, this emergency situation, and the video chat meetings in the rather restrictive framework provided by the online space helped teachers to adopt an integrated and competency-based approach and experience the possibilities of its implementation (3.4; 3.5), which might become a facilitating factor in the implementation of the new early childhood education curriculum in the future.
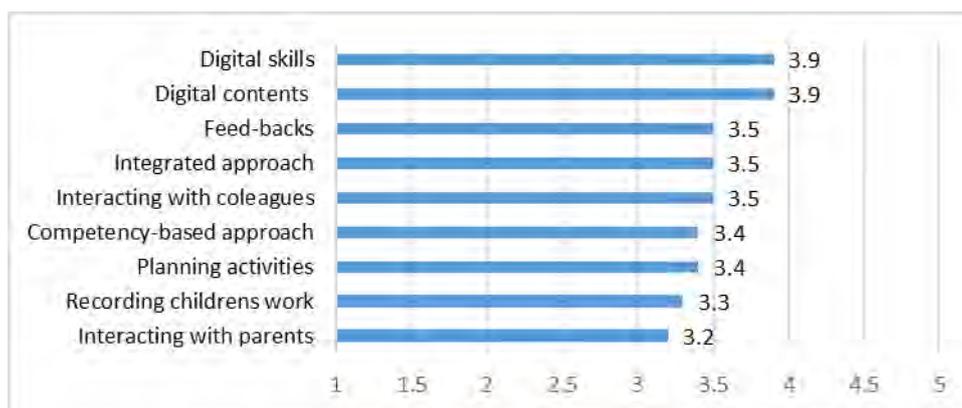

Figure 12. *Online education experiences transferable to offline education*

Answers provided to open questions show that part of the transferable knowledge is didactical and is related to the integration of ICTs to preschool education, while another part is approach related. As regards the didactic potential of ICTs, teachers wish to continue using online portals which offer a rich variety of contents. Teachers also place value on ideas facilitating administration, the management of didactic materials. (*I have been using Padlet since then for organizing teaching materials; Proficiency in organizing didactic materials.)* Teachers would also like to continue professional collaborations (*Participating in professional workshops, exchange of professional information; online courses, conferences: direct, fast and efficient communication between parents, teachers and colleagues*.) Most of the early childhood teachers could experience the practicalities generated by this new situation on their personal lives as well. One of the respondents would like to transfer the relationship capital into offline education: *Honestly, my relationship with my colleague has become even stronger. We are even more united.* Overcoming their own limitations was also an instructive experience: *I never would have thought that I could do this.* One of the respondents briefly sums up the importance of attitude: *the importance of empathy, cooperation and being mindful of others.*

Conclusions

Forray and Kozma (2021) identify four larger groups based on social behaviour during the Covid19 pandemic situation: loyalty, aggression, activity and innovation. Individuals involved in education (teachers, parents, students) most obviously belong to the group of innovation. "They have been activated by the threats posed by the pandemic: their innovative solutions became more and more exciting with each day" (Forray – Kozma, 2021, 41). The present research focused on a particular group of individuals involved in education, namely on the educational practices of early childhood teachers. We identified diverse alternative solutions adopted in this unusual learning environment, in relation to the development of an age group which feels a strong attraction towards digital tools, but on whose use of digital tools approaches vary widely (from total exclusion to use without limitations within a provided framework). In the case of this particular age group innovation had to target not only the use of ICT tools in online activities, the platforms or applications to be used, and how to adapt certain contents for online use but also the enforcement of every tiny segment of the digital diet, in particular the aspects of time and content.

Research results reveal that in the educational practices of early childhood teachers home assignments occupy a leading position. Nonetheless, the opportunities provided by the online space were also used highly creatively in order to achieve goals. "Daring" to participate in online education was influenced not only by technical requirements and digital knowledge but also by the perspective adopted by the teacher. As regards the use of platforms, Google Meet has gained ground during the autumn closure as an institutional contribution. When it comes to applications, teachers most predominantly used the ones which facilitate illustration. The fact that other age-appropriate, interactive applications also surface serves as evidence for teachers' innovative approach.

On the whole, our findings show that the majority of early childhood teachers adopted an open-minded approach in trying to find solutions and employed the most optimal methods adapted to the situation. The high means for transferable online experiences suggest that for most of the teachers managing the educational activity from home really meant online learning. They defined the period of online education as a period of learning and seizing the opportunity to transfer useful elements into offline education.

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