A SWOT Analysis of Online Early Childhood Education During the Pandemic in the Light of an Empirical Research

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Abstract: The study summarizes the specific characteristics of preschool education during the pandemic. This is based on our empirical study, which outlined the phenomena associated with the online development and the digital diet of preschoolers, based on the indicators of the SWOT analysis. In the study, we present the advantages, disadvantages, opportunities and challenges of this educational period along four focuses: online preschool education practice and elements of the digital diet, the chances of the curriculum prevailing, the quality of the educational partnership and the professional development of kindergarten teachers. In every researched area, all elements of the SWOT analysis could be identified. The positives, such as platforms and applications used in kindergarten development, as well as interesting development content elements, the implementation ideas of the curriculum demanded integrated development, the awareness of the role of the educational partnership, the strong development of professional knowledge (especially the digital pedagogical knowledge) are proof that this period cannot be framed only negatively in kindergarten education. At the same time, of course, we have to see the threats and challenges alongside the opportunities. In our study, we outline all these aspects because, since formulating the instructive experiences and making use of them wisely might serve as aids in outlining the educational practices and principles of the upcoming period.

Key words: preschool education, digital diet, online education, pandemic, SWOT analysis

1. Introduction

The COVID-19 pandemic disturbed education and forced an immediate transition to online learning and home education. This gave rise to a large number of questions regarding early childhood education in this period. Some of the issues that needed to be addressed were: finding the most practical way of dealing with preschoolers during this period, defining the digital diet of preschoolers in this context, identifying the necessary conditions for efficient work, establishing the ideal content for synchronous and asynchronous activities, maintaining professionalism, etc. In order to answer these questions, an empirical research was carried out investigating on the one hand, online education practices implemented during this period, and the characteristics of these, and on the other hand, in close connection with this, the chances of the early childhood curriculum implementation. Further issued discussed were that of the early childhood teacher-parent partnership, as one of the defining pillars of efficient early childhood education, and last but not least, the effects of this unnatural learning environment on professional development and learning.

2. Theoretical framework

Demands on early childhood education did not change during the pandemic. In addition to the basic general requirements, such as adapting objectives, content and implementation to the age group; complexity; activity- and play-oriented education; adapting to curricular expectations and to a competence-oriented integrated development approach, and so on, early childhood teachers had to face certain imperatives that previously had been present rather covertly. Some of these, such as the implementation of the elements of the digital diet (Yoo-Young, 2020; Kennedy, Hupert, 2021), i.e. the purposeful and moderate use of digital tools (Fáyné, Hódi, Kiss, 2016) and their incorporation into

educational activities (Hódi, Tóth, B. Németh and Fáyné Dombi, 2019) or the close cooperation with parents (Sapungan, Sapungan, 2014; Kasik, 2017) were postulated as basic conditions that defined the effectiveness of the educational activity in the time of online education, i.e. home education (Barabási, Stark, 2022/a). In teaching, the need for professional development and its realization are the basic conditions for effective development (cf. Szivák et al., 2019). The period of online education and home education was a challenge that required professional learning and development (Agnello, 2021), and the skills to effectively adapt to the situation (Kyndt, cited in Rapos et al., 2020).

3. Research methodology

Considering the empirical aspect of the research, our global aim was to present a picture of the situation of Hungarian early childhood education in Romania at the time of COVID-19 and, accordingly, to identify digital, online early childhood education practices. Closely related to this, our goal was to outline the chances of curriculum implementation, the parent-early childhood teacher partnership, and the professional development and learning characteristics of early childhood teachers. In our correlational research we employed a self-constructed questionnaire as a *research tool* for questioning early childhood teachers and parents, and a self-constructed structured interview to gather data from early childhood education experts.

Data was analysed using SPSS Statistics (frequency, mean, chi-square, analysis of variance, correlation, factor analysis) and we used content analysis for the interviews.

The study sample consisted of Hungarian early childhood teachers from Romania, preschoolers' parents, as well as early childhood education inspectors or methodologist. Based on the database provided by the Department of Minority Education, 14 minority early childhood education *experts were involved* in the study. These were from Bacău, Bihor, Bistrița-Năsăud, Brașov, Alba, Hargita, Cluj, Covasna, Mureș, Maramureș, Satu Mare, Sibiu, Sălaj, and Timiș counties as well as the capital city, Bucharest. All counties with Hungarian preschool institutions were represented in the study. Using convenience sampling, the study was conducted on 423 early childhood teachers (about 18.2% of the study population -2324 individuals). The average age was 40.3. As regards their professional experience, almost half of the sample has more than 20 years of experience, and all age groups were represented. The other subsample consists of parents of Hungarian preschoolers from Romania (N=303), whose average age was 34.59. 60% of the parent subsample live in an urban area, and 82.5% raise one preschooler. In terms of their educational attainment, nearly half (46.9%) of the parents have a university degree. As for the gender distribution of the sample, we found that the entire subsample of early childhood teachers is composed of women, and in the case of the parents, men represent 5.94% of the subsample.

3. SWOT analysis of research results

Results were processed in the light of the main focus points of our research and presented in detail in our previous studies (cf. Barabási, 2021; Barabási-Stark, 2021; Barabási-Stark, 2022/b; Barabási-Stark, 2022/c). The purpose of this study is to compare and systematize research results, identifying positive and negative aspects, opportunities and threats that can be grasped on the basis of the empirical research results at the level of each dimension.

3. 1. Online education practice [1]

A picture of early childhood education during the pandemic was painted based on the opinions of early childhood teachers formulated in questionnaires and the interviews with educational experts. In the specific learning environment triggered by the pandemic, education continues through online meetings or activities and resources provided by teachers for children to complete at home. This special

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[1] For a detailed presentation of the empirical research results on which the analysis is based, see: Barabási, 2021

preschool educational practice contained both positive and negative elements, as well as threats and opportunities.

Among the *positive* features we find that early childhood teachers were highly aware of the need for a closer cooperation with families, and that of mutual interdependence in order to ensure the effectiveness of developmental activities. At the same time, families also became aware of how valuable the early childhood teacher's work is -in many cases this was strongly appreciated -, which also increased families' supportive attitude towards the practical implementation of early childhood teachers' educational efforts during the pandemic. This manifested in parental help provided to children, which was essential in order for the live video meetings and the tasks to be completed at home to "reach their destination". One of the positive aspects, from the point of view of preschoolers, was that teachers proposed and sent a variety of engaging activities for the children, which could be carried out independently and without the use of a digital device, and which stimulated the assertion of free choice and adaptation to children's own needs. Another advantage was the openness teachers showed in finding reassuring educational solutions in these exigent circumstances. Many creative solutions were reported, which were implemented within the framework of the regulations in order to reach as many of their preschoolers as possible. Another positive aspect was the fact that early childhood teachers felt a sense of accomplishment despite the many obstacles and difficulties encountered in the period under scrutiny. Comparing and contrasting positive and negative professional experiences (as teachers went through both during this period), opinions attest to a pedagogical optimism which was without doubt a prerequisite for the enforcement of the previously presented "I will not give up" type of attitude in spite of the difficulties and emotionally burdensome nature of the situation. On balance, there were more positive experiences than negative ones. From a professional point of view, it was a highly positive experience for many early childhood teachers to be able to enjoy professional freedom and to have the possibility to implement their own ideas and approaches to a greater extent. If it had not been for this special situation, teachers would probably not have adopted these. Furthermore, they had the opportunity to experience, especially during the condensed (both in terms of time frame and content) live video meetings, the possible implementations of the integrated and competence-oriented approach and its advantages, which also promoted its acceptance.

As might be expected, there were also *negative* aspects to online early childhood education. Some of these can be related to the attitude of early childhood teachers, as there were teachers who avoided online meetings (for various reasons: attitude, lack of technical and digital knowledge on the part of the parent/early childhood teachers, difficulties in cooperation with families, etc.). The pros and cons of online meetings are, of course, debateable, but in this emergency situation, serving as the only option for meeting, it was much more advantageous than ignoring it all together. On the other hand, if these meetings did take place, adapting to the new learning environment posed a great challenge for all parties involved and it also proved to be time-consuming. The change in the daily routine of preschoolers during home education can be considered another negative aspect. It is interesting to note, that theoretically, the flexibility (in terms of time of the day, group size, platform and application used) of early childhood teachers was considered highly beneficial, but from the preschoolers' perspective, it was one of the strengths of early childhood education- an established routine and the sense of security resulting from this- that was done away with. Online education practice has a range of negative aspects connected to parents as well: possible parental disinterest, the lack of appropriate support for the child (food, drink, etc.), but an inadequate interpretation of parental help could also cause problems, for example, if the parent completed the task instead of the child, answered the early childhood teacher's question and/or whispered the answer to the child, etc.

What posed a *threat* in this period was reaching preschoolers. Some of them were left out as early childhood teachers could not reach them. Another difficulty in terms of reaching preschoolers was that teachers failed to pay attention to each child, thus the reduced value of differentiation also had a negative impact. In addition, difficulties with motivation also increased this theat. The insufficiently developed digital competence of parents/early childhood teachers represented another threat, which made the quality of online encounters questionable. When teachers did not have a solid grasp of time frames with regard to online meetings, extended screen time also posed a threat for preschoolers. A

lack of an adequate system or framework for structuring the plethora of teaching resources and ideas could also be considered a threat, in the same way as failure to assign a suitable amount of online or offline activities. Thus, ignoring both elements of the digital diet (screen time + digital content) could have exacerbated problems during this period. When it comes to the professional efficiency of early childhood teachers, the lack of clear indications from the management can be perceived as a threat. When identified as professional freedom, it did have its advantages, however, with some teachers, it heightened negative feelings of being left behind, hopelessness, and bewilderment and had an adverse effect on the feeling of professional well-being.

One of the *opportunities* we wish to single out is online accessibility owing to modern technology solutions. During the lockdown, one of the strengths was that early childhood teachers could meet preschoolers online, even if not in person. Certainly, this was also a source of threat for those preschoolers who could not take part in these meetings. The future application of experiences gained in this period opens up further opportunities: this period served as a great opportunity for early childhood teachers to create and develop professional resources depending on their digital competence. These resources can be used later on as well, as teachers discovered a variety of ideas, materials, and methodological solutions that promote preschoolers' development even after the pandemic (This aspect posed a threat only if the teacher failed to wisely navigate the sea of information). The fact that early childhood teachers requested and received feedback from parents was also considered an opportunity. Regular feedback stimulated the constant reflection of the educational activity and, as a result, helped to adapt to the needs of the preschooler (and/or their parents?!). While processing results, relying on factor analysis, investigating factors influencing online education, several teacher groups emerged (cf. Barabási, 2021). We claim that the opportunities inherent in online education affect and emphasize different aspects, depending on whether early childhood teachers belong to the group of rule-follower, digital or partner, since based on this approach different focuses and, consequently, opportunities emerged during online education. Undoubtedly, the digital group took advantage of more opportunities from the online space, and there was also diversity in the use of digital tools and applications. The rule-followers were more focused on the aspects of curriculum implementation and on complying with requirements, while the partner group was interested in opportunities for building relationships.

3. 2. Curriculum[2]

The question arose as to what effect this special educational context has on the implementation of the new early childhood education curriculum that has just been introduced in preschool education practice.

The fact that planning was still based on the curriculum in this period as well is considered a *positive* outcome. As the possibility to comply with regulations and to freely test individual solutions existed at the same time, early childhood teachers were also given the opportunity to experience their compatibility. Another positive aspect was that relying on the curriculum, early childhood teachers made an effort to use all types of activities, and to represent all fields of knowledge both in the online meetings and in the tasks assigned. One of the prominent fields was Hungarian, which was beneficial, as mother tongue is an especially important subject at this age. Recognizing that asynchronous and synchronous activities should complement each other, and accordingly, skill subjects that are difficult to implement in synchronous activities are more emphasized in asynchronous ones was another positive feature. One of the strengths was that teachers tried to find ways to implement compulsory curricular elements, paying particular attention to storytelling. In selecting the content, teachers' professional conviction was the primary factor, which indicates that teachers have a correct interpretation of the use of the curriculum as a framework of regulation for education.

2 For a detailed presentation of the empirical research results on which the analysis is based, see: Barabási - Stark, 2021

The lack of clear guidance and regulations in terms of the curriculum was one of the ***negative*** aspects. The outline of online education practice also revealed that, though effort was made to proportionally incorporate areas of development and fields of knowledge, nevertheless, social-emotional and psychomotor domains, as well as Romanian language and skill-developing subjects (music, needlework, drawing, physical education) receded into the background, and since they were more difficult to integrate into online meetings, there was a reduced possibility of direct follow-up for the early childhood teacher.

In terms of the curriculum, the imbalance regarding the areas of development and the fields of knowledge can be seen as a ***threat*** closely related to the previously mentioned negative aspect. Ignoring curriculum requirements can also be classified as a threat in the case of early childhood teachers who showed a more child- and experience-centred, differentiation-, expectations-, and community-centred attitude during home education. They considered it much more important to make online meetings a positive experience for preschoolers, to meet parental expectations and the needs of children and the community, rather than to focus on implementing curricular requirements.

As for the ***opportunities*** that arose in this dimension, it can be pointed out that pursuing the good practices of the experienced integrated competence development might facilitate the implementation of the development approach defined by the curriculum. At the same time, the professional experience gained during the pandemic also provides good opportunities to experience a stronger manifestation of the flexibility conferred by the curriculum.

3. 3. Partnership [3]

Since both parents and early childhood teachers experienced the importance of cooperation in the time of home education - as discussed among the positive aspects of online education-, a separate analysis was carried out investigating this dimension.

Among the ***positive*** aspects we would like to point out the unquestionable appreciation of the cooperation between early childhood teachers and parents, manifested on both sides. Accordingly, it was one of the strengths that efficient educational activity was based on joint decision-making (early childhood teacher-parent), and that teachers deemed it important to take into consideration parents' opinions as a "preliminary study" when making professional decisions. As specified earlier in the study, the disengagement of parents was perceived as a threat during this period, however, the fact that early childhood teachers found efficient ways to motivate parents' involvement, features as a positive aspect in the partnership dimension. Another strength was that the effective collaboration - and hence parents' positive evaluation of the teacher, of screen time, of the quality, variety and nature of teaching materials, etc.- could create a sense of accomplishment which in turn could increase the motivation of early childhood teachers in this stressful period.

There are few ***negative*** aspects in this dimension. It emerged from teachers' accounts, though, that the concept of parental assistance was not always interpreted in the same way by the parent and the early childhood teachers, thus there was sometimes a discrepancy between the amount and area of support requested and received. This served not only as a source of irritation but also as a hindrance to efficient development.

Factors of ***threat*** were identified in the area of partnership as well. The terms of cooperation between the teacher and the parents could give rise to great technical and attitudinal differences, which hindered, even threatened effective cooperation. Inadequate parental help could also constitute a threat, as parents solving their children's tasks, do not help the child's development at all. The lack of consultation with parents, in the case of some parents, also became a risk factor for hindering children's development. Considering pedagogical attitudes, "technical" and "authoritative" teachers did not take advantage of the range of possibilities for cooperating with parents. They rather took

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[3] For a detailed presentation of the empirical research results on which the analysis is based, see: Barabási – Stark, 2022/b

parental support as granted and limited the role of parents to that of providers of the necessary tools and conditions.

Opportunities arise mostly from strengthening the cooperation with the parents and enhancing mutual trust. Early childhood teachers were given the opportunity to experience a leading role in forming a partnership and to take this further into offline education as well. This opens up the opportunity for the manifestation of a partnership attitude on the broad spectrum of education, including, for example, the development of certain elements of the digital diet. In addition to all these, one of the most significant opportunities was the continuation and implementation of the expanded forms of cooperation, good practices, and positive experiences even after returning to in-person education.

3. 4. Professional development [4]

Changes in the educational environment inevitably perturbed the teaching routine of early childhood teachers. Openness and the need for professional learning and growth was a prerequisite for adapting to the new challenges. Some recognized the situation as an opportunity for professional development, while others failed to do so.

The *positive* aspects of this dimension are on the one hand the heightening of the need for professional development, and on the other hand the features offered by those areas of professional development that can increase the effectiveness of educational activities in the long run: developing digital competence, shaping the approach to education, methodological enrichment, strengthening professional relationships, and consolidating competence-oriented development. Another strengths is that partnerships developed not only between early childhood teachers and parents but also at the level of colleagues.

One of the *negative* aspects was missing out on the countless opportunities for development and enrichment offered by the online space. Teachers who showed openness benefited from these opportunities, however, there were teachers who not only did not familiarize themselves with the rich methodological resources, but also did not take advantage of the many professional further training opportunities (which arose especially during the second wave of closing down educational institutions).

At the same time, if adopting the right attitude, this period offered early childhood teachers the *opportunity* for continuous learning and development. Another opportunity for professional development is the continued use of the acquired digital knowledge (in communication with parents, in providing information, in systematizing resources, and in the professional and moderate integration of digital resources and tools into offline education).

Failure to recognize opportunities, as a result of empowering negative experiences, can pose a threat to professional development. A negative attitude can easily lead to disadvantages obscuring advantages, thus making it impossible to take advantage of the learning opportunities, which in turn compromises professional development.

4. Conclusion

Using the SWOT analysis as a framework for investigating the characteristics and effects of homeschooling and online early childhood education practices, strengths, weaknesses, threats and opportunities were identified in the dimensions under scrutiny. Becoming aware of the negative aspects, but of the threats in particular, can be the first step in the effort to eliminate them. Although it is hoped that early childhood education will part with the online learning environment and home education, awareness can also help to resolve the negative aftereffects during offline education, through targeting neuralgic points. When one focuses on the positive aspects and seizes opportunities,

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[4] For a detailed presentation of the empirical research results on which the analysis is based, see: Barabási – Stark, 2022/c

there is a chance that, despite the various negative aspects and challenges, they come out of the examined period professionally enriched and solidified. Formulating the instructive experiences and making use of them wisely might serve as aids in outlining the educational practices and principles of the upcoming period.

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