

Original Research

Perspectives for the transition from preschool to primary school education in an online environment

Zoi T. Apostolou

Department of Preschool Education Sciences and Educational Design, University of the Aegean, Greece

Correspondence to: apostolo@upatras.gr

Abstract: The Covid-19 world health crisis has profound implications and its consequences throughout the world have social, cultural, economic and educational ramifications. Worldwide, preschool teachers were forced to develop the students' learning experience in a new online environment. This research aims to investigate preschool teachers' views about literacy and literacy practices during face-to-face and remote teaching. As a result, the effectiveness of these practices during remote teaching to support the transition from kindergarten to primary school is investigated. Views and practices from 18 Greek preschool teachers were collected with semi-structured interviews and were analyzed using thematic analysis. The results showed that although, during remote teaching several literacy activities took place, teachers expressed their frustration with literacy and transition practices implemented in this educational setting. Teachers seem to be really disappointed with this experience, especially for written language activities, as they considered that the problems they faced and the transformations that were made to their literacy practices did not offer the appropriate framework to meet the requirements of the primary school and the transition from early literacy to school language. Furthermore, they expressed their desire to create a framework for collaboration by primary school teachers via a continuous and systematic training program, especially in case that 'remote teaching comes back'. In conclusion, preschool teachers' reactions and attitudes could be the pillars for establishing a framework for collaboration to ensure continuity through a balanced literacy program and the transition from kindergarten to primary school.

Keywords: Literacy, Transition, Early childhood education, Primary school, Remote teaching, Pandemic Covid-19

Introduction

In March 2020 the World Health Organization declared the Covid-19 outbreak as a global pandemic (Cucinotta & Vanelli, 2020). The consequences of the Covid-19 pandemic throughout the world have social, cultural, economic and other ramifications, as with the aim of preventing the virus, new data shaped our daily life. In this context, education changed significantly during the pandemic. Schools and Universities were faced with an

unprecedented and difficult situation as they were forced to stop their usual educational practices and were pushed to remote teaching. Remote teaching was a temporary displacement of the standard teaching process (face-to-face contact between teachers and students in class) due to the pandemic crisis with the adoption of online teaching methods (Hodges et al. 2020; Lockee, 2021; Stanistreet et al. 2020).

Unfortunately, to a large extent, this new reality found the participants in this process, teachers and students, unprepared.

Received: Sep.28,2022; Revised: Dec.9,2022; Accepted: Dec.29,2022; Published: Jan.06,2023

Copyright ©2023 Zoi T. Apostolou.

DOI: <https://doi.org/10.55976/rppe.1202321285-20>

This is an open-access article distributed under a CC BY license (Creative Commons Attribution 4.0 International License)

<https://creativecommons.org/licenses/by/4.0/>

However, it seems that an attempt was made to adapt and organize the educational process with the world of technology and information to replace direct communication and contact, written and oral speech in their traditional form and to annihilate distances by giving a flexible and interactive dimension in education. Digital media have been fully utilized in differentiated teaching methods (Lockee, 2021; Stanistreet et al. 2020) that have come to replace traditional teaching methods by transforming the educational process and simulate to some extent the usual and traditional teaching process. Remote teaching providing the ability to overcome any spatial distance and any time limitation (Ally, 2008), utilized various educational platforms, such as *Webex*, *Zoom Video Communications*, *Microsoft Teams*, *Big Blue Batton* which tried to simulate the traditional teaching model so that students did not miss important time of their learning process.

While most schools implemented alternative methods to continue functioning during the pandemic period, the success of these varied in their effectiveness and placed students at different social levels in their learning process (Reuge, 2021; Stanistreet et al. 2020). The use of alternative forms of education in some cases has had, as result, a lack of learning and disengagement from the learning process (Reimers, 2022). With regard to this situation, all preschool teachers were forced to use some digital tools in the educational process (Gomes et al., 2021; Musthofiyah, Sopiah, & Adinugraha, 2021). Several teachers chose a blend of methods to meet the needs of their students with a hybrid of both synchronous and asynchronous teaching (Reuge, 2021; Timmons et al., 2021). Many researchers indicated a number of barriers that preschool teachers faced during school closures, such as technical skills both for teachers and children and lack of infrastructure as well as lack of training for teachers in distance learning (Abdul-Majied et al., 2022; Apostolou & Lavidas, 2021; Timmons et al., 2021).

In this context, one question arises regarding literacy practices in the period of the Covid-19 pandemic to preschool children aged 4-6 years through remote teaching and the degree of convergence of these practices with the corresponding practices of traditional face-to-face teaching: how could preschool teachers ensure the transition of children from kindergarten to primary school, the transition from early literacy to systematic teaching of language in a primary school context? According to the basic goal of Cross-Thematic Curriculum (CTC) for kindergarten¹⁻¹, preschool education in Greece is an integral part of our educational system (Dafermou et al., 2006; MoE/PI, 2002) and therefore, national planning of a structured transition from pre-primary to primary school, even though remote teaching, seems more important than ever.

Literature Review

1-1 In Greece, for kindergarten (4-6 years old), Cross-thematic Curriculum Framework for kindergarten (Ministry of Education/Pedagogical Institute [MoE/PI], 2002a) is the official curriculum.

Literacy as a lifelong learning process supporting the transition from preschool to primary school education

The term literacy is used to denote one's effective participation in social processes. It concerns a social practice, one of the most important practices of ensuring personal and social integration. The path to literacy is not a matter of a few years of school attendance, but is a lifelong process that is viewed as a continuum with various levels that are acquired during a person's life, from the basic to the most developed (Djonov et al., 2018). As at an early age the foundations are built and laid in such a way that will help the child succeed in later school life and in other dimensions of his life (OECD, 2010; UNESCO, 2016; UNICEF, 2019). The path to literacy is a lifelong process that begins in preschool (UNICEF, 2019). Therefore, a child's literacy experiences in preschool are crucial for all children, since preschool is not just the first phase in a person's lifelong literacy process, but is its foundation. According to the Department of Education and Early Childhood Education (DEEWR, 2009:37): «*Literacy involves a variety of modes of communication including music, movement, dance, narrative/storytelling, visual arts, media and of theatre, along with speaking, listening, watching, reading and writing. The foundations for all these skills are built in childhood*».

United Nations Educational, Scientific and Cultural Organization (UNESCO, 2016) and European Literacy Policy Network (ELINET, 2016), in order to promote literacy globally, define early childhood education as the first direction of building strong academic and social foundations. In other words, it is recognized that early childhood education plays a key role as the foundational phase in the literacy pathway, which has a multiplier effect as it 'empowers people', makes them 'able to participate fully in society' and contributes to the improvement of life in an ever-increasing digital, text-mediated, information-rich, rapidly changing world (EACEA/Eurydice, 2011).

In recent years the value of childhood literacy, linked to the subsequent school success or failure of the child and contributing in the long term to social well-being, social justice and the development of democracy, has been of increasing interest to the international community (UNESCO, 2017). Development is directly linked to high-quality experiences provided to the child at this age (Heath, 1983; European Commission, 2008; UNESCO, 2015; Djonov et al., 2018), which in some part mean the practices of strengthening and/or teaching initial literacy in the family and school context (Hanemann, 2015). Promoting literacy in childhood through high-quality experiences and a balanced curriculum for school context is directly linked to students' subsequent school success or failure (UNESCO, 2005). Alongside early literacy and as the child is introduced to the 'structured formal educational context', school literacy takes place and is realized. School literacy is determined and

developed to a large extent by the pre-existing knowledge acquired from the wider family environment. By ensuring a successful home-to-kindergarten and kindergarten-to-primary school continuum, collaborative practices can be 'the stepping stone' to provide higher quality literacy and reading experiences at home as well as at school.

There are many levels in the education continuum, and each time a child moves from one level to the other transition occurs (Rimm-Kaufman & Pianta, 2000). An important aspect of the effectiveness of educational practices is students' smooth transition from one level to another (Margetts, 2002). Amongst educators, the term transition is commonly understood as points in a learner's journey where they are transitioning to a different level/stage of learning, a new organisation, a more advanced (or in some cases more achievable) programme or exam course (Koglbauer, 2022). In our study we are using the term transition to describe the period of time before and after a child moves into primary school (from an early childhood programme) and the passage from one to the other.

Transition from preschool to primary school is one of the major steps that each child has to take in the education continuum and it is very important for the child's future physical, emotional and intellectual development. Several researchers (Apostolou & Stellakis, 2019; Ackesjö, 2013; Ahtola et al., 2011; Alatalo et al., 2016; Dockett & Perry, 2007; Hjelte, 2005) mentioned that a stronger connection amongst kindergartens, primary schools and parents could support the transition to primary school. Therefore, transition can be greatly facilitated if educators from one area, for example early childhood education, work with those of the next level, that is, the primary school and vice versa (Ackesjö, 2013; Rimm-Kaufman & Pianta, 2000). Furthermore, the promotion of cooperation between kindergarten teachers and first-grade primary school teachers based on a balanced curriculum for the teaching of literacy ensuring the continuity of teaching interventions in the next level (Ottley et al., 2015), would contribute to the transition of children to primary school (Ackesjö, 2013; Alatalo et al., 2016; Broström, 2002).

Greek preschool and primary school curricula, as we can see in the next section, describe and analyse learning areas and teaching practises for its level, without referencing or considering any integrating aspects or transition processes between kindergarten and first grade of primary school.

Greek context for Literacy

In Greece, preschool education is connected to primary education. Law 1566/1985 stipulates that preschool education belong to primary education (children 6-12 years old); a great part of its operation follows the same legislative regulations that are in force for primary schools. Specifically, early childhood education is provided in kindergartens, which operate independently or in centres together with state primary schools for children aged 4-6. Since September 2007, under the provisions of Law

3518/2006, the second year of childhood education is compulsory for young children who reach the age of five by 31st December of their enrolment year. Since 1984, preschool teachers are trained at university departments of education, a fact that has contributed to elevating the status of early childhood education (Sofou & Tsafos, 2009). In Greece, the Cross-Thematic Curriculum Framework for kindergarten (CTC) (Ministry of Education/Pedagogical Institute [MoE/PI], 2002a) is the official curriculum. The preschool CTC provides instructions for planning and developing activities in the following five school learning areas: Language, Mathematics, Environmental Studies, Creation and Expression (through Fine Arts, Drama, Music, Physical Education) and Computer Science. According to the CTC, these learning areas are not conceived as independent subjects for independent teaching. Instead, the teachers consider these areas when planning and implementing meaningful and purposeful activities for the children. Thus, 3 years after the curriculum's publication in the Government journal in 2003, the Ministry of Education and Religion published a 431 page-long book, the Preschool Teacher's Guide (Dafermou et al., 2006). The PTG constitutes the basic tool for kindergarten teachers and contains theoretical and methodological support, guidelines on the teaching of the five learning areas described above and good practice examples of development and planning of activities. The PTG includes a separate chapter for Literacy (Sofou & Tsafos, 2009).

Primary education lasts six years (from ages 6-12) in Greece. Children who turn six by December 31 can enrol in the first grade and attendance at this level is compulsory. At primary level, the Cross-Thematic Curriculum for Compulsory Education (CTEC) (MoE/PI, 2002b) is organised into 6 levels, each of them corresponding to one (1) out of six (6) primary school grades. The teaching subjects of primary school are Religious Education, Language, Mathematics, History, Study of the Environment, Geography, Natural Sciences, ICT, etc. Modern Greek Language at first-grade is taught for 9 hours per week (European Commission [EC], 2019).

In the learning area of language, the Greek curriculum for kindergarten (CTC) includes: Oral language (speaking and listening), Written language and Reading. In this context, many research efforts have been made to identify literacy practices that will be most effective for preschool children (see e.g., Kondylis & Stellakis, 2006; De Silva Joyce & Feez, 2016) with most proposing some model of literacy teaching (see e.g., Kennedy et al., 2012; Ottley et al., 2015). The biggest controversy between these research approaches and the models they propose is found, especially with regard to reading, in the emphasis placed, on the one hand, on technical skills, such as phonological awareness, decoding, etc. and on the other hand in practices, such as extracting and rendering the meaning of a text, etc. Despite the variety of literacy practices proposed by curriculum preschool teachers often try to combine these practices to enhance their students' literacy and 'prepare' them for the transition to first grade.

The Greek curriculum for kindergarten (CTC) and the Cross-Thematic Curriculum for the first two grades of primary school (CTEC), in the language learning area, refer to modern teaching approaches, such as the whole-language approach, emergent literacy, the communicative approach and functional use of language (Apostolou, 2021). According to these theoretical approaches, school literacy involves not only the code of written language, but also various other achievements in the multimodal communication environment of our time (Apostolou, 2021; Campana, Mills, & Ghoting, 2016). Today, first-grade language teaching (from age 6 to 7) is moving away from the great debate that dominated the second half of the last century, mainly in the Anglo-Saxon area, about which is the best method of teaching first reading/writing: instruction of decoding skills (decode written and encode spoken language) or functional use of language in a communicative environment (Apostolou, 2021).

According to the explicit (for the first grade of primary school) or implied (for the kindergarten) proposals of curricula, the continuity of literacy practices for the kindergarten and the first-grade is encouraged and indicated as important (Apostolou, 2021). The question is how preschool and primary school teachers can support, through their literacy practices, the continuity proposed by both of these curricula.

Literacy practices in preschool education during face-to-face and remote teaching

The practices with which the teachers implement (more or less) the theoretical principles and teaching approaches of literacy are described as practices for strengthening and/or teaching early literacy. Enhancing literacy and teaching it are complex and demanding processes. According to National Institute of Child Health and Human Development (NICHD) *'Teaching reading comprehension strategies to students at all grade levels is complex. Teachers not only must have a firm grasp of the content presented in text, but also must have substantial knowledge of the strategies themselves, of which strategies are most effective for different students and types of content and of how best to teach and model strategy use'* (NICHD, 2000, p. 15). It is also important that teachers stay up-to-date on research on effective teaching strategies. Therefore, teaching reading and enhancing literacy require a wide range of skills and abilities that must be acquired during initial teacher education and continuously improved through training programs in the context of Continuing Professional Development (CPD) (Eurydice, 2011).

According to the Greek curriculum (CTC) the goal of education today is the formation of learning environments that acquaint children with a variety of tools for processing and exchanging information in order to face the challenges of contemporary social reality and decode the world around them (MoE/PI, 2002a).

According to previous research (Apostolou, 2021; Campana

et al., 2016; Kondylis & Stellakis, 2006; Tracey & Morrow, 2007; Xue & Meisels, 2004) preschool teachers in face-to-face teaching seem to take into account children's interests and knowledge (emergent literacy) and consider literacy as an ability to understand and draw meaning (communicative approach) and not as a simple skill of decoding written symbols or spelling (conventional literacy). Preschool teachers, in order to enhance literacy in their classes, adopt a combination of approaches related on the one hand to practices, such as extracting and rendering meaning from a text, etc. and on the other hand technical skills, such as phonological awareness, decoding, etc. (Apostolou 2021; Campana et al., 2016). Specifically, according to Apostolou's (2021) research the most common and frequent practices adopted by preschool teachers in their classrooms to enhance literacy are: phonemic awareness activities, recognition of phonemes, syllables and words, reading techniques, oral and written language, using books and utilization of the library, borrowing books, listening to stories, acquiring and forming vocabulary, producing oral speech based on pictures or free creation, formulating hypotheses and developing argumentation, awareness of the connection between spoken and written language, understanding the relationship between listening and speaking - reading and writing, contact with various textual genres.

Reading and writing engagement contributes to the acquisition of reading and writing skills and there are various methods which can be used to stimulate pupil engagement (Apostolou & Stellakis, 2019). According to Education, Audiovisual and Culture Executive Agency (EACEA, 2011:81) *'text-based collaborative learning, offering diverse reading materials, letting pupils read what they like, visiting places where people value books, are some of the most significant methods suggested by the research literature and by European central curricula'*. So, as can be seen by further researchers (Apostolou & Stellakis, 2019; Broström, 2002; Dockett & Perry, 2007; Pianta et al. 1999), in face-to-face teaching of literacy preschool teachers try to empower their students by preparing them for the transition to the first grade of primary school and the school language by combining teaching models and techniques.

In the era of the pandemic, the question arose as to whether the education system in Greece was adequate and ready to face such an unprecedented situation of health scope, which affected the educational community quite a bit. During the pandemic, preschool teachers were forced to use ICT in education (Nikolopoulou, 2020; Pyun, 2021; Samuelsson, Wagner, & Ødegaard, 2020). The variety in the means of education, the ease of use of technological tools and the multiple principles of learning and teaching gives a qualitative dimension to remote teaching (Zhao, 2020; Lockee, 2021; Stanistreet et al., 2020).

Several research studies (e.g., Apostolou & Lavidas, 2021; Lavidas et al., 2022; Hodges et al. 2020; Zhao, 2020) explored the difficulties encountered and the teaching practices adopted by preschool teachers in various learning

areas. However, no research was found regarding the practices adopted by preschool teachers during the pandemic period for literacy to ensure the transition of preschool students to primary school. As the practices of a transition concerning the learning area of literacy do not seem to have been unaffected by the forced admission of remote teaching to preschool education, the question of comparing and relating the two ways, of face-to-face teaching and alternative practices adopted in the digital age is really important for academic community. Furthermore, it concerns the coexistence of didactic literacy practices that draw from many and different discourses, modern and traditional, continued in kindergarten during the period of remote teaching and ultimately to what extent the continuity that seems to exist and is suggested (even if in a not entirely clear way) by the official preschool and primary school texts (Apostolou & Stellakis, 2020) seems to have been able to be supported by the preschool teachers. The research gap identified both in the international and mainly in the Greek scientific community strengthened the need to conduct the present research.

In Greece there is no formal evidence or guidance from curriculum for this transition process from kindergarten to first grade of primary school. In this context, preschool teachers' role as an "intermediate" (mediator/facilitator) of literacy in the acquisition of reading, written language and cultural literacy, is considered as really important. In conclusion, this research aims to investigate Greek preschool teachers' views about literacy and literacy practices during face-to-face and remote teaching affected on students' transition from kindergarten to first grade of primary school.

Research aims

This research aimed to investigate:

- a) Preschool teachers' literacy practices during face-to-face and remote teaching and their collaboration practices with primary school teachers for literacy.
- b) Preschool teachers' views about whether and how their literacy practices during remote teaching affect students' transition from preschool to primary education and the changes which will be needed if remote teaching comes back.

Methodology

Research procedure & research instrument

This research was carried out from January to May 2022, some months after educational institutions returned back to face-to-face education. Research followed a qualitative methodology that allows researchers to analyse facts holistically and in-depth (Bryman, 2016). More specifically, we focused on preschool teacher's views and

literacy practices before and after the pandemic. Semi-structured interviews with preschool teachers were carried out. Teachers' participation was voluntary and ethical issues were considered; all participants were assured that, should they wish to participate in the research, their comments and input would remain anonymous. The interviews were conducted individually and at a distance (web meetings), each interview lasted about 25 minutes.

The interview protocol was based on the research objective. Before the primary survey, the interview protocol was tested with one preschool teacher to review the interview and make corrections. This teacher is not included in the final sample.

A set of semi-structured interview questions was created for the research. Specifically, this set consisted of a series of questions and the respondents were asked to answer or comment on them in a way that they thought best (Cohen, Manion, & Morrison, 2007). Questions (according to the topic of this paper) included in the interview protocol are presented in Table 1. It consisted of two parts. The first part was the demographic profile of teachers. The second part was about preschool teachers' views and literacy practices.

Additional questions emerged during the interviews and were discussed with the aim of exploring the participants' views and practices more in-depth.

Participants

The purposive sample consisted of 18 female preschool teachers from Western Greece and specifically from the prefecture of Achaia. Firstly, we selected¹⁻² all preschool teachers (from this prefecture) who participated in remote teaching in both periods (March-June 2020, November 2020-January 2021) in which the pandemic Covid-19 forced the closure of schools. Secondly, from these preschool teachers, the sample was selected by simple random sampling, which is one of the probability sampling types (Creswell, 2016). The initial selection for participating in the interviews included 21 voluntary preschool teachers, but only 18 out of 21 teachers participated in the interviews, and therefore the final sample consists of these 18 teachers. This research, whose value lies in the design of a qualitative research, aims to gather qualitative data from this representative sample (Creswell, 2016) and can serve as a basis for further relevant (qualitative or quantitative) researches.

Table 2 presents the demographic information of the participants. Regarding the individual characteristics of the sample, there are 18 preschool teachers which were all female. In Greece, the share of male kindergarten teachers is only 1.25%, while it increases as educational levels go up (HSA, 2017). Half (9) of our sample had basic higher education (university and/or academy), while the other half (9) had additional studies (in service training programs and/or postgraduate and/or Ph.D.). It is worth noting that in Greece, many preschool teachers (39%) have received a

1-2 We collected the data from the Directorate of Education of the prefecture in which the survey took place.

Table 1 Interview protocol

First part

Teacher's gender, studies, number of students in remote teaching.
Training in distance learning.
Training in literacy.

Second part

Literacy practices in a preschool context during face-to-face and remote teaching

1. Describe your literacy practices in face-to-face teaching and in remote teaching.
2. Describe any differences between the practices for oral and written language during remote teaching.

Collaboration practices about literacy during remote teaching and transition from preschool to primary education

3. Describe your collaboration practices with first-grade teachers of primary school for literacy during remote teaching.

Preschool teachers' views about literacy during remote teaching for transition from preschool to primary education:

4. Consider if your literacy practices during remote teaching were effective/sufficient to cover the cognitive/learning requirements of the first grade of primary school.
5. Consider what you would change regarding literacy, if remote teaching was "forced" to return, for ensuring students' transition to the first grade of primary school.

Table 2 Demographic characteristics of the sample and characteristics of settings.

Teacher code	Studies	ICT training	Training in literacy	Number of students in digital classroom
PT1	Graduate	No	No	4
PT2	Post graduate	Yes	Yes	15
PT3	Post graduate	No	No	6
PT 4	Post graduate	Yes	No	8
PT 5	Graduate	No	No	9
PT 6	Graduate	No	No	16
PT 7	Graduate	No	No	14
PT 8	Post graduate	No	No	9
PT 9	Graduate	No	No	9
PT 10	Post graduate	Yes	Yes	16
PT 11	Graduate	No	No	6
PT 12	Post graduate	Yes	No	14
PT 13	Post graduate	No	No	7
PT 14	Post graduate	Yes	No	8
PT 15	Graduate	No	No	12
PT 16	Graduate	No	No	8
PT 17	Post graduate	No	No	4
PT 18	Graduate	No	No	5

Table 3 Categories of content analysis

1. Preschool teachers' *literacy practices* during face-to-face and remote teaching affected student's transition from kindergarten to first grade of primary school
2. *Differences between practices for oral and written language* during remote teaching
3. Preschool teachers' *views about whether and how their literacy practices* during remote teaching affected their students' transition from kindergarten to first grade
4. *Collaboration practices* between preschool and first grade teachers for literacy during remote teaching
5. Preschool teachers' *views about the changes* that will be needed if remote teaching was "forced" to return

post graduate education (HSA, 2017). However, only 5 (31,3%) have been trained in distance education, and 2 (11,1%) have been trained in literacy. While usually in a preschool classroom in face-to-face teaching there are 15 to 25 students, in the digital classroom only 5 (31,3%) preschool teachers stated that

attending it and other teachers referred fewer students almost 15 students had been (Table 2).

Data analysis method

Initially, all interviews were recorded and transcribed verbatim (Bryman 2016; Braun & Clarke, 2006). For the qualitative data analysis, we used the technique of content analysis having the content of the sentence/phrase as a unit of analysis (Creswell, 2016). Transcripts were coded using the following 5 *categories of analysis* (Table 3) that emerged from the answers of the teachers (Braun & Clarke, 2006).

The coding process includes various units of analysis that were highlighted. Sentences are taken as the units of analysis which are according to their semantic meaning (Koustourakis, 2018). The sentences were placed into one of the above categories. A traditional analysis procedure, in which we used tables with categories classifying sentences to each category (tables in Word files), was finally used. Furthermore, teachers' responses were quantified and their frequencies are depicted in the results.

Confidentiality procedure

In designing and conducting the research we considered ethical issues and ethics, by requesting permission of the teachers who participated in the research for the processing and analysis of their data (Bryman, 2017; Creswell, 2016). Prior to the start of each interview, the participant was briefed on the purpose of the survey, the value of participation, the anonymity of participants and the communication of the results. Furthermore, the collected information from each participant was assigned pseudonyms (numbers) as part of concealing participants' identities. Confidentiality was guaranteed by assigning passwords to files of softcopy data and unauthorized persons had no access to the collected hard and softcopy data (Bryman, 2016; Cohen & Manion, 2008).

In the following section, the research results are presented.

Results

The findings of this research are presented along with the five main categories of content analysis. Several of the statements of the participants in the questions they were asked as well as percentages of their responses to the categories are simultaneously depicted in the results.

Preschool teachers' literacy practices during face-to-face and remote teaching

Research findings show that almost all the interviewees (17) stated that during face-to-face teaching they used to do several literacy activities. The conducted thematic analysis revealed these content units according to the research question: producing oral speech based on pictures or free creation (17), teaching awareness of the connection between spoken and written language (17), phonemic awareness activities (17), recognition of phonemes (16),

1-3 Additional question emerged during the interviews.

syllables and words (16), reading techniques (17), acquiring and forming vocabulary (16), using books and utilization of the library (17), borrowing books (17), listening to stories (17), contact with various textual genres (17). Specifically, one teacher stated that:

"I did a lot of literacy activities: phonemic awareness, recognition of phonemes, syllables and words, reading techniques, acquiring and forming vocabulary". (PT 2)

One other teacher stated:

"I used to do many activities for literacy because my students love them: utilize library to borrow books for my students and to ask them to describe or to narrate them to me after their return to classroom, contact with many texts of multimodality (maps, magazines, newspapers, etc)". (PT 8)

The coexistence of didactic literacy practices that draw from many and different discourses, modern and traditional, seems to be reflected in these answers. Preschool teachers adopt a combination of approaches related to practices, such as extracting and rendering meaning from a text, etc. and technical skills, such as phonological awareness, decoding, etc. They seemed to take into account children's interests and knowledge (emergent literacy) and understand literacy as an ability to draw meaning (communicative approach) and not as a simple skill of decoding written symbols or spelling (conventional literacy).

For remote teaching (15) preschool teachers stated that, although they faced a lot of difficulties and barriers, they tried to implement many of these activities for literacy, mainly with the utilization of several digital tools (12) (ppt, digital material, online communities, etc.) or platforms (11) (Webex, Zoom Video Communications, Microsoft Teams, e-Me, etc.) which were really new for them. In particular, according to PT8:

"During Covid-19 I participated in both periods of remote teaching and I tried to adjust my methods to the new situations. Firstly, I continued to use the material I have in my classroom for daily routines but after some days I realized that there is specific digital material for these routines, I searched for some online communities in social networks like Facebook and I adjusted them to my remote teaching. Secondly, I used many power point presentations and some digital fairy tales. But it was not easy, I had a lot of difficulty mainly in literacy practices". (PT 8)

With the question 'Describe any differences of literacy practices during remote teaching in relation to face-to-face teaching'¹⁻³ 15 preschool teachers noticed that there were many differences among these settings, while 3 participants declared that they were completely different. For remote teaching setting thematic analysis revealed these content units according to the research question: preschool teachers reported some difficulties and barriers faced during it (15), considered and evaluated remote teaching as a really difficult educational process, especially for kindergarten and much more for written language (15), considered that their educational system had no "readiness" for distance

education (17), referred to the lack of spontaneity (14), more limited options for literacy in the digital classroom (15), short activities to keep students interested (10), initial enthusiasm and interest was gradually reduced (14), fewer stimuli and activities in less time in the digital classroom (12). Some teachers mentioned:

"Remote teaching has been significantly differentiated in many ways in relation to face-to-face teaching, especially for kindergarten. From online informal communities we got ideas, we exchanged opinions, we 'borrowed' material, but frankly it was still not enough to meet the requirements and the conditions of the learning process provided for the kindergarten". (PT9)

"I tried significantly to make the learning process of remote teaching like it is in face-to-face teaching, for children familiarisation. I don't think we accomplished much. Children found it difficult to follow, there were technical problems, they got bored easily, we could not insist on targeted actions except those that were very impressive and innovative for the children. I cannot in any way compare the learning process of face-to-face teaching with that which happens in distance learning". (PT5)

Preschool teachers referred at these two settings (face to face and remote teaching) reporting the differences between them. Specifically, they seemed to evaluate remote teaching as a really different and difficult educational environment for preschool education. They reported that the combination of approaches and the coexistence of didactic literacy practices that draw from many and different discourses seems to be really difficult for remote teaching.

Differences between practices for oral and written language during remote teaching

According to the preschool teachers, differences were identified in literacy practices for oral language in relation to the written one, during remote teaching. Content units, according to this research question, referred to: the gap among oral and written language activities (12), the use of digital tools mainly offered for oral language (13) and more less for written speech (3), oral activities such as descriptions (17), narrations (16), fairy-tales (15), routines (18) discussions (14), dialogue (15) suggestions (12), predictions (12), argumentation (12) are really often in remote teaching, and only 'hangers' (2), 'crosswords' (3) and 'wheels' (3) were reported from the participants for written language during remote teaching. Some of these preschool teachers mentioned:

"Cultivating the oral language with descriptions, narrations, fairy-tales and routines is a basic goal during remote teaching. Unfortunately, for the written language, more targeted preparation is required". (PT7)

"We mostly stuck to the oral language with discussion, digital fairy tales, etc. In the written language I did some 'hangers', 'crosswords', 'wheels', etc, but it was very difficult to get the children to participate actively". (PT11)

In the same context, another preschool teacher reported: "...for oral language with discussions and dialogue. The written language was very hard to approach. Distance does not help. How to be 'near', 'next' to the student, to pick up the pencil, the marker, how to encourage him?". (PT13)

Three (3) preschool teachers, 2 of them with post graduate studies and training in literacy, noticed that both oral and written language activities were carried out in the same way and almost to the same extent. One teacher mentioned:

"Oral and written language was cultivated as well as in face-to-face teaching, in the way in which students were already familiar". (PT6)

Nevertheless, 2 teachers stated that in remote teaching written language is a more general (and not an individual) activity, happening simultaneously for all the students. One teacher mentioned:

"In a remote teaching setting, the participation of all the students was universal. That means that all the children wrote the date, the day, the weather, etc at the same time. In face-to-face teaching, our students usually participate in rotation due to the limited time". (PT12)

Furthermore, something really important that was mentioned by a preschool teacher (PT10) was that an amount of time given for speaking, for oral language was less than the time given in the face-to-face sessions. This teacher also stated, as the two previous participants (PT12, PT15), that the time for written language was the same for all students in remote teaching. The remarkable point is that these teachers (PT10, PT12, PT15) had many (16) students who attended their digital classes, compared with other teachers participating in the survey.

According to preschool teachers' words, oral language was highly promoted naturally and effortlessly during remote teaching in a preschool context. These findings verified that basic skills for oral, written and multilingual communication are considered equally important and the lack of one of them can significantly affect children's development. This is one further reason for preschool teachers reflecting on the difficulties of remote teaching and not providing an adequate educational experience for their pupils.

Preschool teacher's views for their literacy practices' effectiveness during remote teaching for students' transition from preschool to primary school

Regarding the effectiveness of literacy activities carried out during remote teaching for the transition process from kindergarten to first grade, the conducted thematic analysis revealed, preschool teachers answered negatively teachers' negative attitude about it. Especially, for 'the effectiveness of literacy practices during remote teaching to cover the cognitive/learning requirements of the first grade of primary school', all participants (18) answered negatively. Content units, according to this research question, referred to: they considered it difficult to formulate an opinion (17),

they had not read the primary school curriculum (18), they could not anticipate the cognitive/learning requirements it demands (17). More specifically, teachers stated that:

"I do not know the cognitive and learning requirements of primary school. I believe that we did not prepare our students for first grade during remote teaching. I would like to know what first-grade teachers expected, how satisfied they are...I would like to cooperate with them in some way. For literacy, I'm sure we failed to prepare our students because we faced many difficulties in remote teaching". (PT3)

In the same context, regarding the effectiveness of their methods during remote teaching all participants (18) denied that 'these methods could be sufficient to meet the expectations and requirements of the primary school first grade teachers'¹⁻⁴. More specifically, teachers reported that:

"I don't think we could adequately prepare our students. There were many difficulties. That's why we need to know exactly what first-grade teachers want and expect from us, from kindergarten, and in another way, I absolutely believe that they need to know what we do in our classrooms. In the digital classroom I think we did not meet their expectations, their requirements". (PT10)

Some of the participants (14), especially those with post graduate studies and training in ICT and literacy, referred to 'the transformations in literacy activities that had to be done in order to adapt to the particular circumstances and the didactic requirements of remote teaching'¹⁻⁵. They seemed to try to adjust their practices in such a way as to be more effective (14) and sufficient (12) to cover to some extent the cognitive/learning requirements of the first grade of primary school. Teachers, mainly those with previous training in distance learning (4), stated that:

"I adapted my practices to the new data; I chose those literacy activities that would be «innovatively different» and more «attractive» from what we did in face-to-face teaching." (PT14)

Furthermore, for the transition from preschool to primary school setting one preschool teacher (PT10) mentioned:

"In face-to-face teaching we are always by each student's side to explain, to help, to describe and to understand. In remote teaching, technical difficulties, that often arose, greatly affected the process of consolidation and understanding. In this context, it was not easy to prepare our students for their transition, to explain about the 'big' school. In face-to-face teaching we have the opportunity to visit one primary school, mainly the one which is often co-located, to exchange options and material, to make practice and activities together." (PT10)

Preschool teachers considered that language activities during remote teaching applied in a preschool setting had no effectiveness as they were not adequate to cover the cognitive/learning requirements of the first grade of primary school. Consequently, they seemed to consider enhancing/ensuring the transition of preschool students from kindergarten to primary school setting a difficult

situation in a remote teaching setting.

Collaboration practices between preschool and first grade teachers for literacy during remote teaching

Research findings revealed these content units according to the research question: all preschool teachers, during remote teaching, did not collaborate with first grade teachers in literacy as to promote students' transition from kindergarten to first grade (18), considered it really difficult to implement these activities (18), they referred to the need of collaboration and good organizing (17), they focused on solving their technical problems (17), they did not have the opportunity for collaboration practices (18). On the contrary, confirming the difficulty during remote teaching, they reported that in face-to-face teaching 'we could collaborate with first grade teacher' (15), 'we could visit first grade classrooms many times especially in the second semester of the school year' (14) and 'first grade students could visit our classrooms' (14). Pointing out the difficulty for collaboration practices during remote teaching, some participants stated that:

"We were not concerned about collaboration at all as we focused on our newly arrived students and their needs along with the multimodality of demands of the current school year". (PT5)

"In all these years, I have never collaborated with primary school teachers. There is no case to collaborate during or after remote teaching, where the conditions were really difficult". (PT14)

Most teachers expressed frustration with the lack of cooperation with first grade teachers to enhance literacy (16) and to ensure the transition of students (17), as well as their perceptions of the discontinuities and what they feel are presented in the teaching practices between the two education levels (17). One teacher said:

"I think that teachers of first grade would be very disappointed by the cognitive level of the students who went to the first grade this year and maybe they finally understood the importance of kindergarten for children". (PT17)

In conclusion, preschool teachers reported with great dismay at this lack of cooperation with primary school teachers to support students' transition from kindergarten to first grade.

Preschool teacher's views about the changes that will be needed if remote teaching was "forced" to return to our lives

Research findings show that 17 of the 18 kindergarten teachers interviewed seemed to agree that should there be a need to return to remote teaching, many changes are required. Some content units according to the research question revealed: that those practitioners with training in ICT, highlighted the need to effectively integrate technology

1-4 Additional question emerged during the interviews.

1-5 Additional question emerged during the interviews.

into the classroom (15) by transforming and integrating digital learning activities into front-line teaching activities (14), they seemed to agree that preschool teachers could play a very important and essential role for students' transition to primary school (17). In addition, they reported a pressing need for a cooperative framework (16), a common training program (16) and common practices with primary school teachers and students (14) should remote teaching return. Furthermore, practitioners with post graduate qualifications and training in ICT and literacy, referred to the need to emphasise practices for written language (14). One preschool teacher reported:

"If this happens, emphasis should be placed on written language. It needs some extra cultivation preparing our students for the transition to first grade." (PT10)

Another teacher stated:

"We have to respect the continuity from kindergarten to primary school. We must change and create a framework with a common training program for collaboration by primary school teachers. We have to overcome the gap between preschool and primary school setting which grew significantly during remote teaching." (PT13)

Research findings pointed out the need for significant changes in literacy practices in preschool classrooms should remote teaching be 'forced' to return to education. Those practitioners with post graduate studies and training in ICT, seemed to refer to the possibility of adopting 'blended teaching' should remote teaching returns, by combining practices and methods and by utilizing their experience during the pandemic (Apostolou & Lavidas, 2021; Musthofiyah et al., 2021).

Discussion

The changes taking place in the shadow of the Covid-19 pandemic crisis may accelerate some implications in educational models based on the advantages and disadvantages of using ICT for learning purposes. The research seeks to shed light on the impact of the Covid-19 pandemic on educational systems around the world following the closure of schools and transition to distance learning. In the face of the Covid-19 pandemic, using ICT for learning purposes and adoption of remote teaching methods is becoming extremely important in education systems.

Specifically, this research aimed to investigate preschool teachers' views and practices about literacy during face-to-face and remote teaching and the effectiveness of these practices to student's transition from kindergarten to primary school.

Concerning their practices during the pandemic, preschool teachers stated clearly that although they were not ready for remote teaching (Apostolou & Lavidas, 2021) they tried to adapt to the particular circumstances and the didactic requirements (Eurydice/EACEA, 2011; Westerveld et al., 2015) of an online environment. During remote teaching

they implemented many activities for literacy, mainly with the utilization of several digital tools and/or platforms. Similar findings were found in previous studies (Apostolou & Lavidas, 2021; Lavidas et al., 2022; Nikolopoulou, 2020; Yıldırım, 2021). When preschool teachers were asked to rate remote teaching in early childhood education, they referred to the lack of spontaneity, more limited options for teaching literacy in the digital classroom, short activities to keep students' interest, etc. They seemed to consider and evaluate remote teaching as a difficult educational process because of the lack of training, the lack of equipment or internet connection in schools and students' homes mainly because their educational system was not prepared for distance education. These results support earlier findings (e.g., Abdul-Majied et al., 2022; Apostolou & Lavidas, 2021; Gomes et al., 2021; Lavidas et al., 2022; Timmons et al., 2021) which reported that online teaching always has some limitations for education at all stages. Online teaching is more difficult to carry out for pre-school education (Nikolopoulou, 2020), because the students are young and do not have the skills and knowledge to respond to this condition (Pyun, 2021; Samuelsson et al., 2020). These indications were fully verified in our survey, as the participants (at several points in the interview) pointed out the difficulties young children experienced in meeting the demands of an online environment teaching.

Furthermore, according to the preschool teachers, differences were identified in the activities for oral language in relation to the written one (oral language was highly promoted by descriptions, narrations, suggestions, predictions, argumentation, dialogue between students and/or with teachers), in an online preschool environment. Furthermore, in previous research (Apostolou, 2021:90) mentioned that *«oral language was cultivated naturally and effortlessly, while the cultivation of the written language encountered significant difficulties due to the mediation of the digital tools»*. The lack of relevant research in Greece and globally makes it difficult to interpret this result. Although, as the participants teachers in the present study highlight the importance of literacy in their teaching, these findings verified "languages" key role in the Curriculum focuses on the development of basic skills for oral, written and multilingual communication, which are considered very important for the effective participation of children in the school and wider socio-political environment (UNESCO, 2017).

Regarding the effectiveness of the language activities carried out during remote teaching, preschool teachers, it was difficult to formulate an opinion as they had not read the primary school curriculum, and seemed to be moderate and negative about these. Preschool teachers considered that language activities during remote teaching applied in a preschool setting had no effectiveness and considered them to be inadequate to cover the cognitive/learning requirements of the first grade of primary school and to enhance/ensure the transition of preschool students from kindergarten to primary school setting. According to face-to-face teaching

and in line with the results of previous research (Apostolou et al., 2020; Campana et al., 2016; Scull et al., 2013) preschool teachers in enhancing literacy in their classes adopt a combination of approaches related on the one hand to practices, such as extracting and rendering meaning from a text, etc. and on the other hand technical skills, such as phonological awareness, decoding, etc. In other words, they seemed to take into account children's interests and knowledge (*emergent literacy*) and understand literacy as an ability to draw meaning (*communicative approach*) and not as a simple skill of decoding written symbols or spelling (*conventional literacy*) (Apostolou, 2021, Apostolou et al. 2021). Finally, they evaluated remote teaching as a difficult educational environment for preschool education, considering the combination of approaches and the coexistence of didactic literacy practices that draw from many and different discourses difficult to implement.

So, as evidenced by current research (e.g., Apostolou & Stellakis, 2019), in face-to-face teaching preschool teachers empower and strengthen their students by preparing them with literacy practices for the transition to the first grade of primary school and school language. Therefore, this result seems to be in line with the survey findings. As the participants mentioned during face-to-face teaching, they have the opportunity to implement several methods by combining them, although the question arises concerning the perspectives of the transition from kindergarten to primary school setting during remote teaching, as previous research (e.g., Apostolou, 2022, Apostolou & Lavidas, 2021; Eurydice/EACEA, 2011; NICHHD, 2000) showed that both enhancing literacy and teaching are complex with demanding processes. Our research findings unfortunately verified this academic concern. Preschool teachers who were frustrated by distance education mentioned that it was not sufficient in meeting the expectations and the requirements of the primary school first grade teachers, because of distance and technical difficulties, lack of the opportunity to visit one primary school and exchange opinions and material, to apply simultaneously or in a common setting several projects and similar and/or common activities. The results are in line with the existing research literature (e.g., Ackesjö, 2013; Alatalo et al. 2016; Apostolou & Stellakis, 2019) highlighting the importance of collaboration between preschool and first grade of primary school teachers. Also, according to our research findings, in remote teaching there is no option for collaboration between preschool and first grade teachers. The results showed that in remote teaching the priority for preschool teachers was given to the (technical) problems that existed and arose. Also, the results indicated that preschool teachers seemed focused on finding solutions for their problems and not to collaborate with first grade teacher to ensure the transition for their students.

Furthermore, our findings pointed out the need for significant changes in literacy practices in preschool classrooms should it be the case that remote teaching will be 'forced' to return to education. Preschool teachers proposed

some appropriate activities for remote teaching (e.g., narrations, descriptions, storytelling, etc.). Indeed, teachers highlight the need to effectively integrate technology into the classroom, as they seem to acknowledge this e-learning teaching experience supplied them with technological skills which could be utilized in similar situations. In conclusion, *blended teaching and learning* (Musthofiyah et al., 2021; Short et al., 2021) seems to be for preschool teachers an important part of the ongoing teaching practices that they could choose in their effort to transform and integrate digital learning activities into front-line teaching activities. *Blended teaching and learning* mean the broader process of transforming and adapting (at face-to-face teaching) some new teaching practices based on the ability to find, access and use information, on interacting with other users and navigating the Internet and ICT environment safely and responsibly (Ford et al. 2021; UNESCO, 2021). The question which arose is whether preschool teachers choose a blend of methods with a hybrid of both synchronous and asynchronous teaching (Reuge, 2021; Timmons et al., 2021). Unfortunately, there is no previous research in a preschool context to verify these findings. More research is required to determine the technological benefits for the preschool teachers and the students from this emergency situation during the pandemic and the possibility of adopting 'blended teaching'.

In the context of considering the practices of strengthening literacy as particularly important for preschool education and also as a demanding process for teachers, the question which arose is whether the effectiveness of literacy practices during remote teaching could offer the appropriate cognitive supplies that preschool students need for their transition to primary education. The response of a preschool teacher "*In preschool students' eyes, transition to the 'BIG' primary school seems like something terrible, we are the ones who have to convince them that it is not far from kindergarten...or is it?*" confirmed the value of this research and the need to carry it out on a larger scale, as the transition from one grade to another is a milestone for every student as continuity ensures stability and establishes well-rounded personalities.

Conclusion

The findings of this study add evidence to the emerging literature on a field with relatively little research evidence. In conclusion, schools and countries have reacted to the pandemic quite differently. Some were reluctant to quickly adapt their methods of teaching, others switched more easily. Therefore, all of them have responded to the challenges of the pandemic and introduced digital technologies and instructional solutions. There is no doubt that the Covid-19 pandemic has raised the need for organizing and adopting a 'blended teaching and learning' model, in which online literacy teaching can be both convenient and be facilitated

by 'face-to-face teaching and learning' model activities.

Specifically, the interviews with the teachers revealed some issues as teacher practices and experiences in the context of early primary education during the pandemic. The question remains what research about education during the pandemic tells us about the time after the crisis? How can we extrapolate from these experiences to the future of education, how will these experiences shape the future of learning? In this educational context, what is happening with preschool students' transition from kindergarten to first grade, from early literacy to school literacy, from early literacy to systematic teaching of school language, after the pandemic? How are literacy practices affected by this experience, how teachers and students responded?

The research findings highlight the views and adopted practices of Greek preschool teachers for enhancing students' literacy for the transition to first grade during remote teaching of Covid-19 pandemic. While preschool teachers seem to be disappointed with the experience of literacy practices remotely, there is a willingness to change and to look at creating a framework of collaboration by both preschool and primary teachers. At this point, a strong need for continuous and systematic training of both preschool and primary school teachers on contemporary teaching issues is demonstrated, which would highlight the need for a cooperative kindergarten and primary school framework. Initially, it is important to maintain good teaching practices/approaches as good practices are expected to attract children's interest in getting involved. Activities designed by teachers who collaborate and exchange ideas and projects could be more appropriate for all the students, as they will be based on perspectives that meet creatively and constructively. By rethinking a more creative, innovative, and flexible curricula to be integrated for preschool and first grade primary school, educators can increase possibilities of successfully supporting young children's social outcomes (Apostolou et al. 2020; Spiteri, 2021). Preschool curricula could incorporate guidelines for common face-to-face or online activities.

Taking into account the findings of this study, some implications and suggestions for future online education in the foundational early primary years include teachers' reactions and attitudes which could be the pillars for establishing a framework for collaboration so as to ensure continuity through a balanced literacy program and the transition of preschool students to primary school. Organizing an institutional interaction framework, creating learning communities and adopting action-based methodological approaches would create a framework that could function as a bridge between pre-primary and primary school with obvious positive effects for students, teachers and school community. According to the basic goal of curriculum for kindergarten (IEP, 2021), preschool education is an integral part of the Greek educational system and therefore national planning of a structured transition from kindergarten to primary school seems more important than ever.

Limitations and implications

The value of this research lies precisely in the qualitative design. However, in the context of researches that will be conducted to derive quantitative results, future research is suggested to include a more significant sample, examine school characteristics (e.g., school context and leadership) in relation to teachers' practices, and investigate preschool teachers' good practices during face-to-face and remote teaching, providing insights into which distance education's digital tools could be utilized so as to be more appropriate in reducing barriers and enhancing students' literacy.

This research, whose value is found in the design of qualitative research and the significant results it can produce, must be considered as a first attempt to investigate an unexplored issue due to its importance for preschool and school education.

Consequently, we consider that this study provided valuable insights into how preschool teachers made sense of possible practices for the transition from kindergarten to primary school. Our findings could provide a basis for the discussion that has "opened up" (especially during the pandemic) and concerns how distance education can be used in the best way from all stakeholders. Based on evaluations of experiences during the pandemic, this perspective would want to pursue the future of education based on a digital environment. However, such a view will need to be implemented thoroughly and will need further discussion with teachers and other stakeholders in all academic fields.

Ethics Declarations

All procedures performed with the permission of the teachers who participated in the research for the processing and analysis of their data.

Funding

No funding was received to conduct this research.

Conflict of Interest

The author does not have any potential conflict of interests that may influence the decision to publish this article.

Author's Contribution

Z.A. :Conceptualization, Methodology, Formal analysis and investigation; Writing - original draft preparation,

Writing - review and editing; Z.A.: Funding acquisition, Management activities to annotate (produce metadata), scrub data and maintain research data; Z.A.: Resources, Supervision, Preparation of tables; Z.A.: Programming, Software development, Verification, Submission of a data set to the international repository.

Consent for publication

The author approves of this submission and, conditional upon the decision made by the editorial board from the peer-review process, consent to the publication of the current work. The work has not been, nor has it been submitted to other journals in consideration for publication.

References

- Abdul-Majied, S.; Kinkead-Clark, Z.; Burns, S. C. (2022). Understanding Caribbean Early Childhood Teachers' Professional Experiences During the Covid-19 School Disruption. *Early Childhood Education Journal*. <https://doi.org/10.1007/s10643-022-01320-7>
- Ackesjö, H. (2013). Children crossing borders: School visits as initial incorporation rites in transition to preschool class. *International Journal of Early Childhood*, 45, 387-410, <https://doi.org/10.1007/s13158-013-0080-7>.
- Ahtola, A., Silinskas, G., Poikonen, P., Kontoniemi, M., Niemi, P. & Nurmi, J. E. (2011). Transition to formal schooling: Do transition practices matter for academic performance? *Early Childhood Research Quarterly*, 26, 295-302, <https://doi.org/10.1016/j.ecresq.2010.12.00>.
- Alatalo, T., Meier, J. & Frank, E. (2016). Transition between Swedish preschool and preschool class: A question about interweaving care and knowledge. *Early Childhood Education Journal*, 44(2), 155-167. <https://doi.org/10.1007/s10643-015-0700-y>
- Ally, M. (2008). *Foundations of educational theory for online learning*. In *The Theory and Practice of Online Learning* (2nd ed., pp. 15-44). Athabasca, Alberta: Athabasca University Press. Retrieved January 9, 2019, from <http://www.aupress.ca/index.php/books/120146>.
- Apostolou, Z. & Stellakis, N. (2019). Preschool and first grade teachers' perceptions on working together to enhance literacy. *Educational Role of Language*, 2(2), 101-112. <https://doi.org/10.36534/erlj.2019.02.09>.
- Apostolou, Z. & Stellakis, N. (2020). Teachers' perceptions of integrating kindergarten and first-grade primary school language curricula. *Journal of Childhood, Education & Society*, 1(2), 87-102. <https://doi.org/10.37291/2717638X.20201234>.
- Apostolou, Z., Stellakis, N., Koustourakis, G. (2020). Pre-primary and first grade primary school teachers' perceptions on the integration of pre-primary and first grade primary school curricula in Greece. *L1-Educational Studies in Language and Literature*, 20, 1-21. <https://doi.org/10.17239/L1ESLL-2020.20.01.14>.
- Apostolou, Z. (2021). *Knowledge, perceptions and practices of preschool and primary school teachers about the teaching of literacy and its possible continuity from kindergarten to the first grade of primary school*. (Unpublished PhD Thesis), Department of Educational Sciences and Early Childhood Education, University of Patras.
- Apostolou, Z., Koustourakis, G., Stellakis, N., & Lavidas, K. (2021). Investigation of perceptions and practices of kindergarten and first grade primary school teachers concerning their cooperation for the enhancement of literacy, *Mediterranean Journal of Education*, 1(1), 15-30. ISSN: 2732-6489, <https://doi.org/10.26220/mje.3401>
- Apostolou, Z. & Lavidas, K. (2021). Greek preschool teacher's views about language activities in early childhood education during Covid-19. A chance for change? *Educational Role of Language*, 2(6). <https://doi.org/10.36534/erlj.2021.02.08>.
- Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Broström, S. (2002). Communication and continuity in the transition from kindergarten to school. In H. Fabian, & A.-W. Dunlop (Eds.), *Transitions in the early years*. Debating continuity and progression for children in early education. London: Falmer, 52-63.
- Bryman, A. (2016). *Social research methods*. London: Oxford University Press.
- Campana, K., Mills, J. E., & Ghoting, S. (2016). *Supercharged storytimes: An early literacy planning and assessment guide*. Chicago: American Library Association.
- Cohen, L. & Manion, L. (2008). *Educational research methodology*. Athens: Metehmio.
- Creswell, J. W. (2016). *Research in education: planning, conducting and evaluating quantitative and qualitative research*. Athens: Ion.
- Cucinotta, D. & Vanelli, M. (2020). WHO Declares Covid-19 a Pandemic. *Acta Bio Medica: Atenei Parmensis*, 91, 157-160. doi:10.23750/abm.v91i1.9397
- Dafermou, C., Koulouri, P. & Basagiannis, E. (2006). *Οδηγός Νηπιαγωγού [Preschool teacher guide]*. Athens, Greece: YPEPTH/P.I. [in Greek].
- DE Silva Joyce, H. & Feez S. (2016). *Exploring Literacies Theory, Research and Practice*. England: Research and Practice in Applied Linguistics.
- Department of Education and Early Childhood Education (DEECD) (2009). *Education for global and multicultural citizenship*. Retrieved January 9, 2019,

- from <http://www.eduweb.vic.gov.au/edulibrary/public/commrel/policy/multicultural-ed-strategy.pdf>
- Djonov, E., Torr, J., & Stenglin, M. (2018). *Early language and literacy: Review of research with implications for early literacy programs at NSW public libraries*. Australia: Department of Educational Studies, Macquarie University.
- Dockett, S. & Perry, B. (2007). *Transitions to school: Perceptions, expectations, experiences*. Sydney, Australia: University of New South Wales Press.
- Eurydice/EACEA (Education, Audiovisual and Culture Executive Agency) (2011). *Teaching Reading in Europe: Contexts, Policies and Practices. EACEA P9, Eurydice*. Retrieved January 18, 2020, from <http://eacea.ec.europa.eu/education/eurydice>
- European Commission (EC) (2019). *Organization of the education system in Greece 2009/2010. Eurydice*. Retrieved January 18, 2020, from <https://eacea.ec.europa.eu/national-policies/eurydice/content/organisation-education-systemand-its-structure-33e>
- European Commission (EC) (2008). *Migration and mobility: challenges and opportunities for EU education systems*, Green Paper, Brussels, 3.7.2008, COM (2008) 423 final. Brussels: European Commission.
- European Literacy Policy Network (ELINET) (2016). *Literacy in Greece. Country report*. European Commission: Lifelong Learning Programme.
- Ford, T.G., Kwon, K.A., Tsotsoros, J.D. (2021). Early childhood distance learning in the U.S. during the COVID pandemic: Challenges and opportunities. *Child and Youth Services Review, 131*, 106-297. <https://doi.org/10.1016/j.chilyouth.2021.106297>
- Gomes, J., Christine, S., Kaveri, A. G., Mannan, F. (2021). Early Childhood Educators as COVID Warriors: Adaptations and Responsiveness to the Pandemic Across Five Countries. *International Journal of Early Childhood, 53*, 345-366. <https://doi.org/10.1007/s13158-021-00305-8>
- Hanemann, U. (2015). Lifelong Literacy: Some Trends and Issues in Conceptualising and Operationalising Literacy from a Lifelong Learning Perspective. *International Review of Education, 61*(3), 295-326. <https://doi.org/10.1007/s11159-015-9490-0>.
- Heath, S. (1983). *Ways with Words: Language, Life and Work in Communities and Classrooms*. Cambridge: Cambridge University Press.
- Hellenic Statistical Authority (2017). Kindergartens (Start-End)/2017. Preschool teaching staff by gender, year of birth, region and prefecture - End. Retrieved November 18, 2022, from <https://www.statistics.gr/el/statistics/-/publication/SED11/2017>
- Hjelte, J. (2005). *Cooperation in the border country: About the relationships and communication in collaboration between schools and childcare*. Umeå, Sweden: Umeå Universitet Press.
- Hodges, C., Moore, S., Locke, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educational Review*, Retrieved January 19, 2022, from <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- IEP (2021). *Curriculum of Preschool Education - Kindergarten*. Ministry of Education, Greece.
- Kennedy, E., Dunphy, E., Dwyer, B., Hayes, G., McPhillips, T., Marsh, J., O'Connor, M., & Shiel, G. (2012). *Literacy in Early Childhood and Primary Education (3-8 years)*. National Council for Curriculum and Assessment.
- Koglbauer, R. (2022). Transition in languages in trying times - challenges and opportunities. In C. Hampton & S. Salin (Eds), *Innovative language teaching and learning at university: facilitating transition from and to higher education* (pp. 11-21). Research-publishing.net. <https://doi.org/10.14705/rpnet.2022.56.1369>
- Kondylis, M. & Stellakis, N. (2006). Literacy practices in pre-primary education: one program, two approaches. In: P. Papoulia-Tzelepi, A. Fterniati & K. Thebaios (Eds.), *Literature research and practice in Greek society*. Athens: Ellinika Grammata, 159-180.
- Koustourakis, G. (2018). Analysing the curriculum for students with mild and moderate learning difficulties concerning the teaching of pre-vocational skills. *British Journal of Sociology of Education, 39*(8), 1210-1225. <https://doi.org/10.1080/01425692.2018.1497948>
- Lavidas, K., Apostolou, Z., Papadakis, S. (2022). Challenges and Opportunities of Mathematics in Digital Times: Preschool Teachers' Views. *Education Sciences, 12*, 459. <https://doi.org/10.3390/educsci12070459>
- Lockee, B.B. (2021). Online education in the post-Covid era. *Nature Electronics, 4*, 5-6. <https://doi.org/10.1038/s41928-020-00534-0>
- Margetts, K. (2002). Transition to school-Complexity and diversity. *European Early Childhood Education Research Journal, 10*(2), 103-114. <http://doi.org/10.1080/13502930285208981>
- Ministry of Education and Religion (MoE) (2003a). *Διαθεματικό ενιαίο πλαίσιο προγραμμάτων σπουδών για το νηπιαγωγείο [A cross thematic curriculum framework for kindergarten (CTC)]*. Athens, Greece: MoE [in Greek].
- Ministry of Education and Religion (MoE) (2003b). *Διαθεματικό ενιαίο πλαίσιο προγραμμάτων σπουδών για το δημοτικό σχολείο [A cross thematic curriculum framework for compulsory education (CTEC)]*. Athens, Greece: MoE [in Greek].
- Musthofiyah, L., Sopiah, S., Adinugraha, H. (2021). The Implementation of Distance Learning on Early Childhood Education During New Normal Era of Covid-19. *Journal Educative: Journal of Educational Studies, 6*(1), 32-47. <http://dx.doi.org/10.30983/educative.v6i1.4112>

- National Institute of Child Health and Human Development (NICHD). (2000). *Report of the National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. Reports of the subgroups (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- Nikolopoulou, K. (2020). Preschool teachers' practices of ICT-supported early language and mathematics. *Creative Education, 11*(10), 2038-2052. <https://doi.org/10.4236/ce.2020.1110149>.
- OECD (2010). *Education Today 2010: The OECD Perspective*. OECD Publishing. Retrieved January 19, 2022, from <https://read.oecdilibrary.org/education/education-today-2010edutoday-2010-en#page1>
- Ottley, J. R., Piasta, S. B., Mauck, S. A., O'Connell, A., Weber-Mayrer, M., & Justice, L. M. (2015). The nature and extent of change in early childhood educators' language and literacy knowledge and beliefs. *Teaching and Teacher Education, 52*, 47-55. <https://doi.org/10.1016/j.tate.2015.08.005>
- Pianta, R. C., Cox, M. J., Taylor, L. & Early, D. (1999). Kindergarten teachers' practices related to the transition to school: Results of a national survey. *Elementary School Journal, 100*, 71-86. <https://doi.org/10.1086/461944>
- Pyun, Y. (2021). A Study on the Actual Condition of Kindergarten Distance Education. *Review of International Geographical Education (RIGEO), 11*(2), 291-301. <https://doi.org/10.48047/rigeo.11.02.26>
- Reimers, F. (Ed.) (2022). *Primary and Secondary Education During Covid-19*. Springer. <https://doi.org/10.1007/978-3-030-81500-4>
- Reuge, N., Jenkins, R., Brossard, M., Soobrayan, B., Mizunoya, S., Ackers, J., Jones, L., & Taulo, W.G. (2021). Education response to Covid-19 pandemic, a special issue proposed by UNICEF: Editorial review. *International Journal of Education, 87*, 1024-85. <https://doi.org/10.1016/j.ijedudev.2021.102485>
- Rimm-Kaufman, S. E., & Pianta, R. C. (2000). An ecological perspective on the transition to kindergarten: A theoretical framework to guide empirical research. *Journal of Applied Developmental Psychology, 21*, 491-511. [https://doi.org/10.1016/S0193-3973\(00\)00051-4](https://doi.org/10.1016/S0193-3973(00)00051-4).
- Samuelsson, I. P., Wagner, J. T., Ødegaard, E. E. (2020). The coronavirus pandemic and lessons learned in preschools in Norway, Sweden and the United States: OMEP Policy forum. *International journal of early childhood, 52*(2), 129-144. <https://doi.org/10.1007/s13158-020-00267-3>
- Scull, J., Nolan, A., & Raban, B. (2013). Young learners: interpreting literacy practice in the preschool years. *Australian Journal of Language & Literacy, 36*, 38-47.
- Short, C. R., Graham, C. R., Holmes, T., Oviatt, L., Bateman, H. (2021). Preparing Teachers to Teach in K12 Blended Environments: A Systematic Mapping Review of Research Trends, Impact, and Themes. *Techtrends, 65*(6), 993-1009. <https://doi.org/10.1007/s11528-021-00626-4>.
- Sofou, E., & Tsafos, V. (2009). Preschool teachers' understandings of the national preschool curriculum in Greece. *Early Childhood Education Journal, 37*(5), 411-420. <https://doi.org/10.1007/s10643-009-0368-2>
- Spiteri, J. (2021). Quality early childhood education for all and the Covid-19 crisis: A viewpoint. *Prospects, 51*, 143-148. <https://doi.org/10.1007/s11125-020-09528-4>
- Stanistreet, P., Elfert, M., & Atchoarena, D. (2020). Education in the age of Covid-19: Understanding the consequences. *International Review of Education, 66*, 627-633. <https://doi.org/10.1007/s11159-020-09880-9>
- Timmons, K., Cooper, A., Bozek, E., & Braund, H. (2021). The Impacts of Covid-19 on Early Childhood Education: Capturing the Unique Challenges Associated with Remote Teaching and Learning in K-2. *Early Childhood Education Journal, 49*(5), 887-901. <https://doi.org/10.1007/s10643-021-01207-z>
- Tracey, D.H. & Morrow, L. M. (2007). Fostering early literacy development. In B. Guzzet (Ed.), *Literacy for the New Millennium: Adult literacy* (pp. 111-129). Praeger Publishers.
- United Nations Educational, Scientific and Cultural Organization (UNESCO) (2005). *Aspects of Literacy Assessment. Topics and Issues from the UNESCO Expert Meeting* (2003). Paris, France: UNESCO. Retrieved January 19, 2022, from <https://unesdoc.unesco.org/ark:/48223/pf0000140125>
- United Nations Educational, Scientific and Cultural Organization (UNESCO) (2015). *Education for All 2000-2015: Achievements and Challenges*. Paris, 2015.
- United Nations Educational, Scientific and Cultural Organization (UNESCO) (2016). *Literacy for life: shaping future agendas and education for democracy*. General Assembly resolution 69/141. A/71/177. Paris: UNESCO.
- United Nations Educational, Scientific and Cultural Organization (UNESCO) (2017). *Fostering a culture of reading and writing Examples of dynamic literate environments*. Hamburg: UNESCO, Institute for Lifelong Learning. Retrieved January 19, 2022, from <http://www.unesco.org/open-access/terms-use-ccbysa-en>
- United Nations Educational, Scientific and Cultural Organization (UNESCO) and Council of Europe (2021). *The impact of the COVID-19 pandemic on student voice. Findings and recommendations*. Paris, France: UNESCO. Retrieved March 21, 2022, from <http://creativecommons.org/licenses/by-sa/3.0/igo/>
- UNICEF (2017). *Early moments matter for every child*. New York: UNICEF. Retrieved January 19, 2022,

from https://www.unicef.org/publications/files/UNICEF_Early_Moments_Matter_for_Every_Child.pdf

- UNICEF (2019). *A world ready to learn: Prioritizing quality early childhood education: Global report*. New York: UNICEF. Retrieved January 19, 2022, from <https://www.unicef.org/sites/default/files/2019-08/A-world-ready-tolearn-2019.pdf>
- Westerveld, M. F., Gillon, G. T., Van Bysterveldt, A. K., & Boyd, L. (2015). The emergent literacy skills of four-year-old children receiving free kindergarten early childhood education in New Zealand. *International Journal of Early Years Education*, 23, 339-351. <https://doi.org/10.1080/09669760.2015.1033617>
- Xue, Y., & Meisels, S. J. (2004). Early literacy instruction and learning in kindergarten: Evidence from the early childhood longitudinal study - kindergarten class of 1998-1999. *American Educational Research Journal*, 41(1), 191-229. <https://doi.org/10.3102/00028312041001191>
- Yıldırım, B. (2021). Preschool education in Turkey during the Covid-19 pandemic: A phenomenological study. *Early Childhood Education Journal*, 49, 947-963. <https://doi.org/10.1007/s10643-021-01153-w>
- Zhao, Y. (2020). Covid-19 as a catalyst for educational change. *Prospects*, 49, 29-33. <https://doi.org/10.1007/s11125-020-09477-y>