Informational books at kindergarten: preschool teachers change their practices.

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Abstract. Informational books as distinct kinds of books are highlighted in much research for their impact on preschool children. Their features, such as scientific knowledge, academic language, complex syntactic forms, technical-special vocabulary, and multimodal text provide preschoolers with many possibilities. They give them the chance to gain knowledge about the world around them, to expand their literacy experiences, while familiarity with decontextualized language leads to the development of their critical and academic thinking. However, recent research has found that the time that preschool teachers dedicate to reading informational books is much less than that dedicated to reading fiction. In this paper we present research, with elements of action research, which was carried out with Greek preschool teachers regarding their attitudes about informational books and especially the change in their practices after they participated in this research. Data was collected in various ways (training programme, in-situ practice, personal portfolios, comments and notes during the training meetings) as action research requires. However, it did not begin from preschool teachers' initiative, and this is why we cannot call it actual action research. The results indicated that, although at the beginning of action research the participants were puzzled regarding informational books and their use in kindergarten classrooms, in the end they were able to use them more easily and with more confidence, being ready to change their practices and the contents of their classroom library.

Keywords: informational books, early literacy, Literacy Knowledge Processes, action research

Introduction

Informational books for children are becoming ever more popular in Greek publishing houses and it is easier now than ever to find an informational book to use with children. On the other hand, in kindergartens these books are not utilised as much as they could be, with fiction books being in some cases the only kind of books in reading-aloud time, but also in classroom libraries.

To begin with, it is important to clarify the term 'informational books'. They are separate from literature or hybrid books and contain scientific information about a specific topic. The aim of these books is to inform readers about a subject through precise and scientific knowledge (Merveldt, 2018; Patrick & Mantzicopoulos, 2014). This kind of book is characterized by some specific features. First of all, informational books do not include a story, heroes or chronological sequence of events like fiction books (Patrick & Mantzicopoulos, 2014). Moreover, the vocabulary that is used contains technical and scientific terms which is

expected in academic language. The procedures of comparison description, cause and effect, and problem solving are often observed in these books and help children enhance literacy (Patrick & Mantzicopoulos, 2014). Illustration is one of the most important parts of informational books and in most cases is realistic or there are also photographs for a more lifelike result (Grilli, 2018,2021; Patrick & Mantzicopoulos, 2014; Sanders, 2018). Finally, this kind of book consists of multimodal texts, because they use more than one way to inform readers about the subject of the book (there are texts, illustrations, labels, charts, tables, glossaries, words in bold fonts etc.) (Bluestein, 2010; Cecil et al., 2015; Duke, 2003; Matsagouras, 2001; Merveldt, 2018; Patrick & Mantzicopoulos, 2014; Yopp & Yopp, 2012).

The importance of informational book reading for preschool and primary school children is great and there is much research which has concluded that there are benefits children acquire from shared readings of informational books. Informational books can help children to enhance their literacy skills and broaden and enrich their vocabulary with scientific and technical words (Bergman-Deitcher et al., 2019; Gibbs & Reed, 2021; Tower, 2002; Wright et al., 2022). Also, children become familiar with different text structures and make good use of decontextualized language which is not very common in our everyday speech (Duke, 2003; Cecil et al, 2015; Patrick & Mantzicopoulos, 2014; Shiel et al., 2012). Furthermore, it is significant that informational books can enrich children's background knowledge (Wright et al., 2022). They give children the opportunity to learn about the real world, they introduce them to phenomena and facts that they cannot learn by experience, and they reinforce their previous knowledge (Broemmel et al., 2021; Caswell & Duke, 1998; Gill, 2009; Grilli, 2020; Kotaman & Tekin, 2017). Another way in which informational books support academic literacy is that they familiarise children with research procedure and with science in general (Mantzicopoulos & Patrick, 2011). It is such an important skill for young children to learn how they can conduct research, to understand the steps of research, and finally to discover ways in which they can search for answers to their questions. Also, the development of creative and critical thinking is another advantage children accrue from reading informational books (Cappiello & Hadjioannou, 2022; Cecil et al., 2015; Tabernero-Sala & Colón-Castillo, 2023).

Despite all the advantages of reading informational books research shows that preschool teachers do not them as much as they could in kindergarten classrooms. According to Duke (2000) there were few informational texts displayed in classroom libraries and literacy activities. Another study (Pentimonti et al., 2010) found the same results, that is, preschool teachers tended to use fewer informational texts in their classrooms and preferred to use mixed genres, the books that are also called hybrid. Yopp & Yopp (2006) concluded with the same results. More specifically, preschool teachers preferred to read more narrative texts (77%), while only 8% of the readings were informational texts. Moreover, the focus group research of Alatalo and Westlund (2019) provided information about the difficulties preschool teachers faced during informational book reading and the fact that they seldom read such books to children was the teachers' choice, not at the children's request. There is a notable gap in research in this field in Greece. Although more research is being conducted about informational books, it is not easy to find research on this topic. Most of the research is about informational books as a category and not on how they can be used in a school classroom. The research of Kassotaki-Psaroudaki (2019) constitutes an exception, because it presents a training programme for preschool teachers on how to use informational texts. According to this study, upon completion of the training programme, had enriched their knowledge about informational texts, increased the number of informational texts in their classrooms and overcame many of the difficulties that they faced in the beginning with informational text reading. These findings created a question about Greek preschool teachers' attitudes about informational books, the extent of their familiarity with these books, and the level of reading them with their students.

Method

The aim of the present study is to explore whether preschool teachers have changed their practices concerning the use of informational books following their participation in an action research project, as well as to examine their attitudes toward this type of book. The study sought to address the following research questions:

1. What are preschool teachers' attitudes toward informational books?
2. Are there organized and structured reading activities involving informational books in kindergarten settings?
3. Have preschool teachers changed their practices after participating in the action research?

This study forms part of a broader research project that investigates how preschool teachers use informational books in their classrooms. To examine their attitudes and practices, a mixed-methods design was employed, incorporating both quantitative and qualitative components. The present paper focuses on the qualitative aspect of the larger study. Although the research incorporated elements of action research, it cannot be classified as a full action research project, as the initiative was undertaken by the researcher rather than the preschool teachers. Therefore, it is more accurately described as research with elements of action research, even though it may occasionally be referred to as "action research" for brevity. The action research elements embedded in this study include the integration of theory and practice—a reciprocal relationship in which each informs and enriches the other. Furthermore, the researcher and the participating preschool teachers functioned as a collaborative unit: they acted, learned, and reflected together in the process of seeking answers to their shared questions. Importantly, this type of research emphasizes the emergence of participants' authentic voices—particularly those of the preschool teachers—rather than privileging only the researcher's perspective. Finally, the cyclical process of feedback and reflection enabled continuous evaluation and improvement of the research design and procedures. These features represent core characteristics of action research, as described by Katsarou (2016).

Participants

The sample comprised 10 preschool teachers (teachers for children 4-6 years old) who expressed their willingness and interest in participating in this kind of research. The participants were not selected by the researcher, but they decided to participate voluntarily. The quantitative phase preceded the action research with a questionnaire issued to all the preschool teachers of the Achaia region. At the end of the questionnaire, there was a field which preschool teachers could complete if they wanted to participate in the action research. There was a description of what was planned for this research, and they were called to fill in their contact details if they wanted to take part in it. In this way 10 preschool teachers agreed to participate in the action research.

Data Collection

The action research was conducted over a four-month period (February–May 2023). Data were collected through a combination of sources, including a training programme consisting of seven meetings, the participants' in-situ classroom practices, their personal portfolios submitted at the end of the project, and the researcher's notes and observations recorded during the training sessions. The researcher's notes captured participants' reflections and comments on reading informational books as they emerged during the meetings. The participants' portfolios included documentation of their engagement with informational

books, photographs of the reading activities conducted in their classrooms, explanatory texts describing these activities, and reflective comments about their experiences. The training programme comprised both online and face-to-face meetings, during which participants shared their experiences of reading informational books with children. The researcher, who also served as the coordinator of the programme, provided guidance on reading practices, introduced and explained the theoretical framework of Multiliteracies, and facilitated discussions to support participants throughout the process. The aim of the programme was to establish a learning community in which all members learned collaboratively through mutual support, rather than to "educate" preschool teachers in a traditional, top-down manner regarding informational books. An essential component of this research involved the pedagogical model proposed to participants, which was grounded in the theory of Multiliteracies (also referred to as Literacy Pedagogy) developed by Kalantzis et al. (2019). According to this framework, literacy instruction is organised around four Knowledge Processes: *experiencing, conceptualizing, analysing,* and *applying*. Each of these processes consists of two dimensions, resulting in the following eight components:

- Experiencing the known / Experiencing the new
- Conceptualizing by naming / Conceptualizing with theory
- Analysing functionally / Analysing critically
- Applying appropriately / Applying creatively

The experiencing process (also referred to as *situated practice*) emphasizes the role of context in human cognition and the importance of drawing on patterns of experience and action. The conceptualizing process (or *overt instruction*) involves learners as active conceptualizers who make generalizations, categorizations, and develop theoretical understandings. The analysing process (or *critical framing*) engages learners in examining and evaluating people's motives, interests, and choices. Finally, the applying process (or *transformed practice*) entails the creative and purposeful application of knowledge, often through the production of new texts. These Literacy Knowledge Processes served as the pedagogical model for the participating preschool teachers, guiding them in organising structured reading activities involving informational books. The teachers became familiar with this model during their meetings with the researcher and subsequently designed and implemented reading activities informed by its principles. In this way, the theory of Multiliteracies provided the theoretical foundation for the structured use of informational books in the participating teachers' educational practices.

Data analysis

All data were analysed using content analysis. Firstly, the data were written down separately in two main categories (portfolios, comments/notes). They were read several times to aidthe researcher understand the general meaning, their main points, the ideas and the beliefs of the participants. Subsequently, the text of both categories was divided into smaller parts, to meaning units and then to much smaller condensed meaning units. These meaning units were then labelled with codes and the codes were grouped so that categories emerged. There was also a further categorisation into subjects and overarching themes, which provided a higher level of abstraction to the data (Creswell, 2016; Erlingsson & Brysiewicz, 2017; Katsarou, 2016).

It is worth noting that the study was approved by the Department of Educational Sciences and Early Childhood Education of the University of Patras. Also, all the preschool teachers were informed about the purpose and the procedure of the research and that their

participation was voluntary. They knew that they could withdraw from the research at any stage, for any reason.

Results

Regarding the analysis of the comments and the notes of preschool teachers, content analysis led to one overarching theme and four themes, which conclude the categories of the analysis. The overarching theme is "Preschool teachers' attitudes about informational books" which concluded on the following three themes:
- Practices of using informational books
- Emotional response to informational books
- Beliefs about informational books

Attitudes involve a person's beliefs, feelings and practices (Georgas, 1986) and this is why these three themes were formed. Based on the results, all preschool teachers mentioned the importance of informational books in a kindergarten classroom. The analysis of the comments gave rise to a fourth theme, that is, the "Urge for change and evolution of kindergarten".

With respect to the analysis of the portfolios, content analysis pointed out three themes:
- Knowledge processes of literacy
- Framing informational books
- Assessment of participation in action research

The complete analysis of the data is apparent in the next two figures, which show all the categorization of the data. The boxes with the faded colours include elements of the content analysis that will not be examined in this paper but are part of the general content analysis of the data.
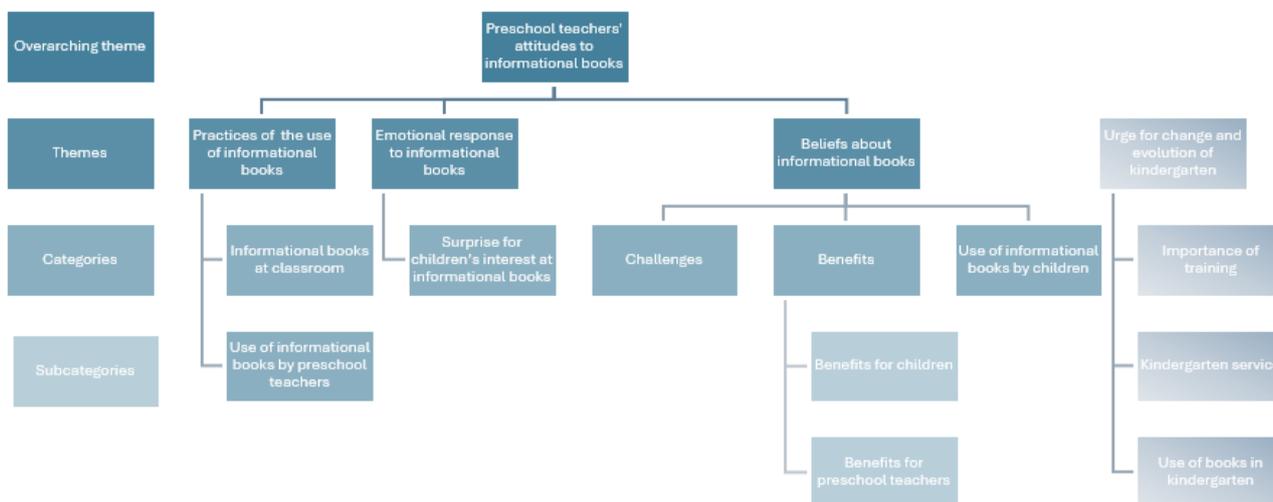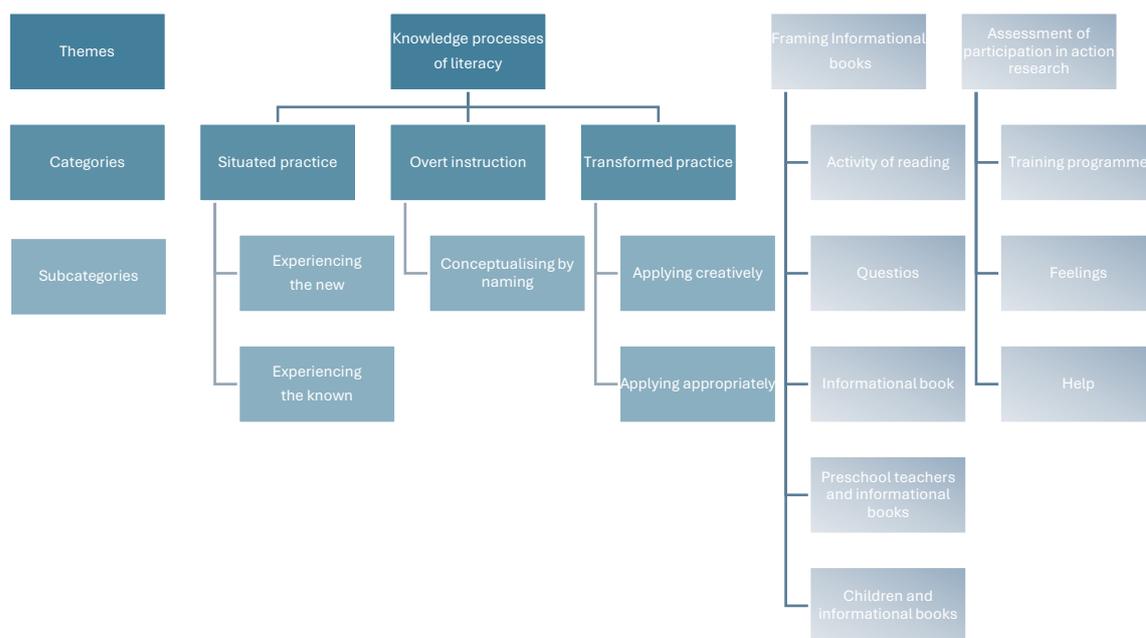

Figure 1 Results of preschool teachers' comments analysis

Figure 2 Results of preschool teachers' portfolio analysis

An example of content analysis as it began from the raw data of meaning units till the overarching themes is provided, in order to make this analysis more comprehensible.

This example arose from the comments of preschool teachers during the meeting with the researcher, and it is based on Erlingsson & Brysiewicz (2017) framework.

Higher levels of abstraction	Overarching theme	Preschool teachers' attitudes to informational books
	Theme	Beliefs about informational books
	Category	Benefits
	Subcategory	Benefits for children
	Code	Skills development
	Condensed meaning units	calm down and concentrate
Lower levels of abstraction	Meaning unit	"With informational books they calm down a lot and they concentrate much easier. They concentrate not only on the book, but generally."

Figure 3 Example of analysis to higher levels of abstraction

Regarding the first research question about preschool teachers' attitudes to informational books, all the participants stated that there was a lack of informational books in their school libraries, both among preschool teachers and in the classroom library accessible to children. However, the majority of the participants indicated that although they may have some in their libraries, they don't give them to children and that this practice should change.

"We must put the informational books on the lower shelves of the libraries and give them to children. Not only the few and old ones of their library, but also the others that we have in the other libraries, the teachers' libraries." (P1)

"You must give space to informational books. We do not do this as preschool teachers. This must be changed." (P3)

"Yes, we don't have these kinds of books, at all. And if we have anything that I don't remember, we may have it in the preschool teachers' library, not in the children's. Not at all." (P7)

Also, a preschool teacher mentioned that it is necessary to devote time to informational books in the daily programme and not be in a rush. All preschool teachers at that meeting agreed with this comment.

"If I didn't have the informational book for bees I would say, ok, these are bees, and that's all and I would finish the activity. It helped me, because I did it right. I said many things. If you decide to use it, it is an amazing tool. You can't hurry through it, do it quickly so you can finish. You must stay with the book, to tell more. You must give time. And children learn better in this way." (P2)

From the comments of the participants during the meetings with the researcher, it was pointed out that although at first, preschool teachers barely knew what informational books were, during the research they became familiar with them, and recognized their value.

"[…] Let's do less during the school year and do it well. We don't need to do all these thematic units. I am occupied with birds and with this book (an informational book) you could use it all year. It has so many things to work with." (P2)

As seen, there is a change in this preschool teacher's attitude regarding both the method of working and organizing a school year and the method of using informational books. It should be noted that all the participants at the beginning of the action research were a bit reluctant to use informational books, but as they took part in more meetings, they shared their desire to use more books of this kind in their classroom.

"I would like to do more now, because I understand better, but the school year is ending, and I don't have time. The next year for sure. All this that we learnt was so nice!" (P1)

"[…] Although in the beginning it was a bit difficult for me, now I understand how to do it, and it isn't so difficult. It is so nice. I would like more (of these activities)." (P5)

Also, many of the preschool teachers were surprised that children selected informational books during reading time. They didn't expect them to show an interest and it was more surprising for them that their students wanted to read these books.

"They liked it so much, till they asked me to read it again. And we did it. And they were sitting again with interest, and they were attending. I didn't expect it. I was thinking: ok with fairytales, but with this one, too?" (P1)

In addition, all preschool teachers noticed a change in their students' practices, which was more than unexpected for them. They seemed to be enthusiastic about this unexpected response in their classes, and they expressed it with their comments during the meetings.

> *"Every time a child ends up with their work, I suggest they go to the library to read a book and many of them now select the informational books."* (P1)
> *"They are interested in these books […] I didn't expect it. It is amazing."* (P6)

With regard to beliefs, most preschool teachers seem to believe that informational book reading has some difficulties which are described below. The most common difficulty was believed to be the lack of time during a school day. They referred to the time which is limited and for this reason they did not know how to make good use of an informational book more frequently.

> *"[…] I struggle using it, because I have only one teaching hour."* (P3)
> *"I don't get around to reading informational books. They need time and often we have time pressure."* (P2)
> *"I don't have time to use them […]"* (P9)
> *"Me neither. They are so pressing these days. So many things must be done at school that we don't have time to do the basics many times."* (P7)

Also, lack of books is a serious barrier for using informational books in classrooms. Greek kindergartens do not have enough books of this kind, so preschool teachers cannot find them easily. The lack of money at schools makes it harder for preschool teachers to find a way to enrich school libraries and this is why most of them highlighted the importance of parents' help.

> *"I would like to use them more, but I can't find them. School doesn't have many. Nothing. Only some old ones."* (P8)
> *"I tried to find an informational book, however I couldn't, while neither the local library nor coworkers had one to borrow."* (P3)
> *"Informational books are a bit expensive. This is difficult for us, you understand. You can't buy many. The kindergarten has also other needs, you can't buy only books."* (P2)
> *"We need parents' help […] we can't buy many (books)."* (P10)

Relating to the second research question, about the organization of structural reading activities of informational books in kindergarten, at the beginning of the training programme, none of the participants knew what informational books are, and incidental to this unawareness they did not use them during the school days.

> *"It is true that I had heard about encyclopaedias or knowledge books, but I didn't know that there were informational books, too. Also, […] I didn't use these books in my daily practice at school, but after my participation in the training I try to add them to the education process."* (P3)

However, as mentioned in the previous comment, while they were becoming familiar with these books, they were using them more and more, using the Literacy Knowledge Processes (Kalantzis et al., 2019). According to this model, which they were taught during the meetings with the researcher, they could involve children through the whole procedure of reading activity. This is not the typical way in which preschool teachers are used to working,

however they quickly showed an adjustment to this one, getting used to it and favouring it. They tried to include as many of the of the Literacy Knowledge Processes as possible while they were organizing a structural reading activity, sometimes using fewer (three out of eight) and sometimes more of them (six out of eight). It is worth mentioning also that, although in the beginning the activities were more teacher-guided, in the end there were more children-oriented ones. In particular, they made good use of the "Situated practice" with the knowledge processes of "experiencing the known" and "experiencing the new", which were very frequent in all participants' portfolios.

> *"I asked children to tell me which colours the rainbow has. Most of the children knew them, except for 1-2 colours."* (P9) (experiencing the known)
> *"We made a connection with the relevant cards and words on the map and additional regions that we already knew for their monuments."* (P1) (experiencing the known)
> *"[…] I presented the clouds trying to say specific details about each of them so they can distinguish them more easily."* (P4) (experiencing the new)
> *"Activities goal was the children's first encounter with the world of birds […] we studied the photos of blackbirds and expanded children's knowledge relating to the world of birds.* (P2) (experiencing the new)

In addition, some of the preschool teachers tried to include some activities from the category "Overt instruction", activities which were detected mainly in the last reading activities that they wrote down in their portfolios. They chose activities from both the knowledge processes of "conceptualizing by naming" and of "conceptualizing with theory", with the first one more often observed in their portfolios.

> *"After we observed the anatomy of a bee, its species and more, and we learnt the terms that they used for all these, we read about their dance and their moves in accordance with flowers […]"* (P4) (conceptualizing by naming)
> *"We focused on two texts of the book which referred to: Black-figure amphorae and Red-figure amphorae and the text reading was done. And in this way, we learnt about these amphoras' categories, we saw their features, we distinguished them and learnt new terms."* (P1) (conceptualizing by naming)
> *"We tried to connect the information so we could understand better what we referred to in previous days."* (P5) (conceptualizing with theory)

Also, all the participants included activities from the "Transformed practice" category either from the knowledge processes of "applying appropriately" or of "applying creatively" or from both. The activities from the first one were very common, because this was the way they reformed the book's information, as mentioned by the researcher at the meetings. This reformation is very important so preschool children can read the result by themselves without an adult's help. It must be written in a way that preschool children can "read and understand". And this is what preschool teachers tried to achieve, according to their portfolios and their comments. Activities from the "applying creatively" process had also frequently appeared in preschool teachers' portfolios.

> *"The end is followed by the reformation of the text content through children's involvement and contribution."* (P3) (applying appropriately)
> *"Every time that one group finished, we were reformatting information that children had learnt in a readable way so all children can "read" this information […]"* (P5) (applying appropriately)

*"As it derives from the images, we made a reformation with the children using a
variety of materials, like sponges, cotton swabs, fingers, papercuts, brushes etc."*
(P7) (applying appropriately)
*"Finally, to consolidate Earth's layers we did a dramatization with our bodies as
well as with different materials (for example scarves, little blocks etc.)"* (P3)
(applying creatively)

It is worth mentioning that none of the participants referred to an activity which incorporates the knowledge processes of "Critical framing". While they were using books about natural sciences, they could include activities from the "analysing functionally" process by transforming what they read to real life and make the necessary connections. Nevertheless, the participants seemed to be unable to continue with this kind of procedure. They could also incorporate activities from the critically analysing process with history books to talk about the Greek Revolution of 1821. However, preschool teachers stopped at the historic event, and they did not continue with a further analysis of it. This choice of participants should be taken into consideration, because it is a strong indication that the preschool teachers did not understand all the Literacy Knowledge Processes equally and the researcher needed to be aware of the organization of their meeting and the whole training program. This procedure is more demanding than the others, given that early childhood preschool teachers should trigger critical literacy both in them and in children and they did not seem to be familiar with it. However, it should be noted that this Knowledge Process is as important as the others, and this is why preschool teachers should acquaint themselves with it.

Furthermore, regarding preschool teachers' practices it has been mentioned that after their participation in the action research, the participants realized that they changed the way in which they use books in general and informational books more particularly. They made comments both in the meetings and in the portfolios about this change, which was more than the purpose of the present action research.

*"Also, I believe it is important to mention that I didn't use these books at my
daily practice at school,
but while participating in the training programme and after that, I try to add
them to the educational procedure."* (P3)
*"Since I filled in the questionnaire, I have changed the library corner [...] and in
the one part of it I have put only informational books."* (P1)

In participants' portfolios there were many comments, such as the above, about the importance of the training programme and the impact that it had on preschool teachers' practices. Some of them implied that with this training programme they had the chance to learn something new, which was very refreshing for them and necessary, too.

*"I feel that I learnt something more, and I needed it, I hadn't heard anything
similar before, and it is important to continue learning and this helped me."*
(P10)

In addition, comments such the one mentioned previously, about the effort by the preschool teachers not only to change children's libraries with more informational books, but also to convince the principal to buy more books of this kind are indications of training programmes' merit. In particular, there was one preschool teacher who, after participating in the action research, informed her principal about informational books and their value, and she encouraged her to buy as many books of this kind as possible, offering her a list of informational books.

"[…] Informational books are important, but I had to explain it to the principal, because I am not alone (at school), you understand […] I gave her a list and we decided to buy at least 2-3 for now, because we will use one now in the spring period or in the summer. And ok, we are going to buy more the next school year if we can. Because after this (the training program) I understood a lot, and I see how much important they are; I want them for my class." (P1)

Discussion

As mentioned above this paper presents a part of a wider study that aims to investigate preschool teachers' attitudes about informational books. However, the overall goal of this paper was to examine preschool teachers' changes regarding their informational book practices in kindergarten. From the analysis of the data which were collected both from the preschool teachers' comments at their meetings with the researcher and from the portfolios they handed in after the training programme ended, all participants changed their practices. All of them mentioned changes in their reading selections, with informational books being used more in their weekly structural reading activities. Even though there were not enough books of this kind in their schools they tried to find informational books so they could use them in class. As it seems to relevant research (Dreher & Kletzien, 2016; Ness, 2011) schools are not equipped with plenty of informational books, and this is an obstacle for preschool teachers when they want to use them. However, one of the participants in the present research referred to her wish to buy books of this kind which led to the principal's encouragement to select these books the next time she planned to buy some. A preschool teacher who at the beginning of the action research had no idea what informational books were, in the end tried to enrich the school library and persuade her principal about it. This change shows the power of the knowledge the participants gained during the action research and that they tried to make good use of it for their own and children's advantage.

Besides the lack of books, preschool teachers highlighted the limited time during the day as an obstacle to using informational books. It seems that preschool teachers believe that a structural reading activity of an informational book requires much more time than those usually assigned for a kindergarten activity (20-30 minutes). These results corresponded to the research of Hammet Price et al. (2012) in which preschool teachers dedicate much more time to reading informational books than to reading literature. The difference between the duration of literature reading and informational book reading may be explained by the way preschool teachers select to read. For example, during an informational book reading preschool teachers may talk more to explain to children what they read, to answer children's questions and to make sure that they understand the content. This extra time for discussion and explanation requires more effort by preschool teachers, and maybe this is why they mentioned the duration of reading this type of book was an obstacle in incorporating them in the school day. Ness (2011) ended up with similar results in a study where preschool teachers indicated that lack of instructional time was a serious obstacle to the inclusion of informational books in the classroom.

By the end of the action research some of the participants were trying to find a way to combine all the other areas of learning with informational book reading. The constraint of the thematic units (research about an interesting topic that they organise in a school year) might be a solution to this issue as this kind of investigational practice needs more time but simultaneously gives opportunities for working in depth and including different kinds of texts, as one of the participants suggested. She argued that it might be better to analyse fewer topics, if this means being more focused and involved in the procedure. It is very hopeful that

preschool teachers who are used to a more traditional way of organizing their teaching methods and routines across the school year are willing to make such a change to their practices; this shows that a change to their mindset has already taken place, which is crucial for preschool teachers to change their practices.

Although at the beginning of the training programme the preschool teachers faced some difficulties, while they were reading informational books and becoming familiar with them, they stopped mentioning difficulties and other problematic situations. They were using these books gradually more and they were becoming familiar with the way it was proposed to organise structural reading activities. It seems that when preschool teachers engage in a training programme specialized to a specific topic, they gain knowledge about it and learn in depth. This is why more professional development programmes should be organized to help preschool teachers overcome difficulties that they face (Kassotaki-Psaroudaki, 2019; Ness, 2011).

Preschool teachers' method of organising the structural reading activities of informational books is in line with the previous result. At the beginning of the training programme, they used more traditional methods, such as reading the text and explaining a few words. Also, at the initial phase the Literacy Knowledge Processes were not fully implemented. The preschool teachers gradually managed to include the Literacy Knowledge Processes in their readings in a very creative and interesting way more as they became more familiar with them. This indicates their willingness to making a greater effort to becoming better preschool teachers. The observation also revealed that in the beginning the reading was teacher-centred, and the questions were about checking children's knowledge. At the end of the programme the reading was children-oriented and, as the children asked questions, the preschool teachers encouraged their classmates to answer the questions. Therefore, participating in a training programme of this kind helps preschool teachers change their attitudes to informational books and better understand how to organise informational book reading and set their teaching goals (Kassotaki-Psaroudaki, 2019).

Furthermore, it is worth mentioning that none of the participants planned an activity from the knowledge process of "critical framing". Although they seemed to understand all the other processes and made good use of them during the training program, they didn't show the same interest for this one. That should be taken into consideration, but also the reasons which lead to it. Most of the books that they read were about natural sciences, so they could use one of the two processes (analyzing functionally). However, they selected books about history, too which were offered for both knowledge processes (analyzing functionally/analyzing critically). The researchers should pay attention to this result and be aware of it for another training programme about these knowledge processes. More explanations and more examples of activities of this kind should be given, so participants can understand better when and how to apply an activity from "critical framing" process. As is mentioned and above, this Knowledge Process requires the activation of critical literacy, which is not very easy both for preschool teachers and children. It demands another kind of reading of the book which is accompanied by in depth discussion of the topics, which discussion leads to the realization of being different ways of presenting the facts and different ways of interpreting them. Maybe, the lack of familiarization on preschool teacher's behalf with this process driven them not to organise a relevant activity.

In addition, another change to preschool teachers' practices was observed in the classroom libraries. In the beginning there were no informational books in the libraries. There were either no informational books at all, or a very few in the principal's office. This means that children did not have access to this category of books. While the action research was unfolding, the preschool teachers were figuring out a way to enrich the children's library with informational books, even though the cost of the books was a challenge for them (MacKay et al., 2020). This change in their practices is another example of the change in their mindset,

which makes the impact of the present action research more important, because they realized the significance of using a variety of texts and therefore types of books in the classroom (Saul & Dieckman, 2005). It is worth mentioning the importance of having informational books from a wide range of interests, multiple copies of some titles, but also a well-organized library where books are accessible to children (Young et al., 2007).

Finally, the change in their practices has an impact on children's relations with informational books. Even though at the beginning of the research, children seemed not to be aware of informational books, in the end they were observed selecting informational books to read during free choice activities, they asked preschool teachers to read or even reread informational books and spoke about them in a way that showed there was a strong bond with these books. Research indicates that children show interest in these books when they are exposed to them, even though they might not have enough access to them (Kuhn et al., 2015; Patrick & Mantzicopoulos, 2014). The new relation of children with informational books derives from their preschool teachers' change in their practices, so it should be considered an important change that action research brings on.

The findings of this study contribute to pointing out that preschool teachers can change their practices, and they do it when they learn something in which they are interested and when they realise its importance. Training programmes, either during action research or not, are more than appreciated by preschool teachers who have the urge for personal and professional development (Kassotaki-Psaroudaki, 2019). The unclear ideas about informational books that they had at the beginning of the research disappeared after their participation - an indicator of the impact that this training had. However, it is important that preschool teachers continue to make good use of what they learnt, so they can take advantage of informational books and therefore of their participation in the action research in general. Nevertheless, to succeed in all the above it is necessary to continue supporting preschool teachers and encouraging them to use these books in their classrooms (Ness, 2011).

Recommendations – Limitations

In the present study the sample consisted only of female preschool teachers. This is because the vast majority of preschool teachers in early childhood education in the area are women. There are only a few men, and we think that in future research they should be involved.

A second limitation has to do with the number of participants. A larger sample would map the attitudes (beliefs, feelings, practices) in a more concrete way. Also, participants from another geographical region could enrich the data and thus the research results. However, lack of time and money to manage a larger group and in different regions is a limitation when action research begins.

According to the present research, preschool teachers seem to hesitate to use informational books when they are not informed and trained on how to use them. They use them occasionally and they are unclear as to how to read them. However, when they were trained about these books, their special features, their importance and how to read them, preschool teachers not only accepted them, but they really embraced them and preferred them during a school day. Preschool teachers became a learning community shared knowledge and their practices with co-workers and not only with a researcher; they had the chance to learn in depth and gain both knowledge and real interest in these books. We need to promote this kind of learning community, so preschool teachers feel safe in an authentic training environment to excel and improve their practices in the way they want and feel comfortable with. This research could be an incentive so preschool teachers incorporate informational books in their classrooms and the Counsellors for preschool education could shed light on

their importance and give preschool teachers the necessary knowledge and skills to include them during their structural reading activities.

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