Home learning activities

Formal and informal home learning activities in Greek families and the factors that can influence them

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Abstract

Home learning activities can influence a variety of children's cognitive skills. Those activities were in previous studies distinguished in formal and informal. It was hypothesized that the two types will not be correlated with each other. Moreover, the informal type will be more often applied and the socio-economic status of the family and the parental academic expectations for their children and beliefs will affect this preference. Greek parents (N=79) answered the Questionnaire of Home Learning Activities regarding their home practices, academic expectations and beliefs and the Children's Book Check List regarding the children's exposure to storybooks. Formal and informal activities were uncorrelated. Additionally, the Greek parents used more often formal home learning activities. The SES status of the family wasn't significantly related with the two types and only parental expectations were related to both types whereas parental beliefs were only related to formal home learning activities.

Introduction

The home environment provides children with many learning experiences that are very important for children's cognitive and social development. Parents are constantly being informed by the literature, studies and professionals about the importance of home learning experiences for children's cognitive development. It seems a plausible assumption that different types of learning contexts and opportunities lead also to different outcomes in children's cognitive development. There may also be external factors that can influence children's home learning environment. This study aimed at a better understanding of activities that take place in families and how they are affected by family factors.

Taking into consideration the importance of home learning environment, Snow, Chandler, Goodman and Hemphill (1991) argued that there are three theoretical models which can explain how family can enable the acquisition of language and literacy: the Family as Educator, Resilient Family, and Parent–School Partnership models. The Family as Educator model consists of five variables: home literacy environment, direct teaching, creating opportunities to learn, parental education and parental expectations. In the Resilient Family model the family is considered as a "protector" against external pressures while providing what is needed for fostering the acquisition of language and literacy. The model is consisted of three key variables: family organization, family emotional climate and family stress.

Finally, according to the Parent –School Partnership model, parents who form a constructive and cooperative relationship with their children's school are more successful contributing in their children's language and literacy achievements. The model consists of five key variables: formal parent–school involvement, frequency of contact with teachers,

homework help by parents, nature of parent–child interaction during homework and school attendance and punctuality (Snow et al., 1991).

Later, Bennett, Weigel and Martin (2002) examined the relation between those three theoretical models and children's emergent literacy skills. They found that only the Family as Educator model, which consists of five variables: home literacy environment, direct teaching, creating opportunities to learn, parental education and parental expectations, was significantly related to children's book- related knowledge, receptive and expressive language skills.

According to Senechal, LeFevre, Thomas and Daley (1998), children's home literacy activities can be divided into two types, informal and formal activities. Formal activities are those for which the parent teaches the child directly, such naming letters or teaching the alphabet. Informal activities are those in which parents and children focus their attention on the context of the text and not the text itself, such as during story book reading. In a similar line, Phillips and Lonigan (2009) used the terms "out-side" to describe informal activities and "in-side" directed home learning activities to describe formal activities. In previous studies was found that the two types of home learning activities are independent from each other (Senechal and LeFevre, 2002; LeFevre et al., 2009; Skwarchuk, 2009; LeFevre et al., 2010). Thus some parents may engage often in both formal and informal activities, others may engage more often in either formal or informal activities and still some others may feel that it is not their responsibility to participate in home teaching activities with their children.

Based on the above distinction, this study was particularly focused on investigating the differences between the two different types of home learning activities and the ways they are influenced by the family factors among Greek parents.

Informal activities and children's literacy development

Many studies have been conducted in order to examine the relationship between informal home literacy activities and children's literacy development (Bennett, Weigel & Martin, 2002; Foy & Mann, 2003; Lawhon & Cobb, 2002; Payne, Whitehurst & Angell. 1994; Stephenson, Parrila, Georgiou & Kirby, 2008). Shared book reading is the most studied form of informal home literacy activities and its influence on children's literacy development has been researched thoroughly in many studies (Senechal, Thomas & Monker, 1995; Debaryshe, 1991; Walsh & Blewitt, 2006; Justice, Meier & Walpole, 2005).

For example, Senechal and LeFevre (2002) in a longitudinal study followed up children till the end of grade 3. They found that storybook exposure at home can enhance children's receptive vocabulary in kindergarten and, as a consequence, receptive vocabulary can benefit reading skills in grade 3. Additionally, they found that the independent reading of children, measured by the end of grade 1, can influence children's reading skills in the end of grade 1 and 3. Kim (2009), in a Korean children's sample, using a parental survey in order to assess home literacy activities, found that the frequency of shared book reading activities was

positively related to children's phonological awareness, letter naming knowledge and vocabulary. Finally, Mol, Bus and de Jong (2009), in a meta- analysis with 31 studies aiming at interactive reading in enhancing children's literacy and oral language development, found that children's oral language and print related skills can be positively affected by interactive reading.

Formal activities and children's literacy development

Although there are not as many studies regarding formal home learning activities compared to informal activities, they indicate that home experiences based on teaching are related to a variety of aspects of children's emergent literacy development, such as phonological awareness, oral language and print knowledge. For example, it was found that activities in which parents teach their children are significantly related to letter knowledge (Haney & Hill, 2004; Evans, Shaw & Bell, 2000; Stephenson et al. 2008). More specifically, Haney and Hill (2004) found that parental teaching is strongly related to vocabulary, expressive and receptive, begging reading skills (alphabet knowledge and letter names) and concepts about print, namely book handling and knowledge of punctuation and spelling.

According to Hood, Conlon and Andrews (2008) parental teaching activities are directly related only to preschool reading skills. However, parent teaching activities, are indirectly related to preschool reading skills, reading and spelling rate and receptive vocabulary in grade 1 and phonological awareness in grade 2. However, Kim's (2009) study indicated a negative relationship between parental teaching and Korean children's phonological awareness and vocabulary. Kim (2009) provided with two possible explanations for these findings. The first explanation is that Korean parents in the sample may have adjusted their frequency of teaching according to their children literacy development. Namely, they tended to teach their children more frequently when they knew that their children are struggling with their literacy acquisition. The second explanation is based on the finding that Korean parents would engage in such activities only after the teacher's notion for their children's slow literacy development. Both these explanations suggest that parental teaching does not have actual negative effects on Korean children's development of vocabulary, phonological awareness and literacy skills and that parental teaching is more frequent when there is already a fall back in the children's vocabulary, phonological awareness and literacy skills.

The same pattern was shown in a Greek and Canadian parents' sample (Manolitsis, Georgiou, Stephenson & Parrila, 2009), where parental teaching was associated with higher decoding scores in Grade 1 for the Canadian children but with lower deciding scores for the Greek children. The authors provided the same explanation as Kim (2009), namely Greek parents are more likely to use formal activities when they are informed that their children are struggling with their literacy development. (Manolitsis et al., 2009)

Finally, Senechal and Young (2008), in a meta- analysis with 16 intervention studies aiming at children's reading development, separated the intervention in three categories. The first category included the intervention where parents read to their kindergarten children. The second category included intervention where parents listened to their children read books. And the third category included those where parents were instructed to teach their children specific skills related to reading skills (learning the alphabet, using flash card in order to learn new word or reading words). The results demonstrated that the interventions where the parents were instructed to teach their children specific skills had the greatest affect on children's reading acquisition.

Based on all the aforementioned studies and taking into consideration the influence of both formal and informal home learning activities on aspects of the children's emergent literacy development, as among which: vocabulary, phonological awareness, it seems interesting and important to examine the parental trends regarding the choice of use of either of the types and also to investigate the family factors that can alternate this choice.

Parental trends on engagement in formal and informal learning activities

Although there has been much research regarding the effects of informal and formal home literacy activities in children's literacy development, there is still the question whether parents engage more in one specific type (Bennett, Weigel & Martin, 2002; Foy & Mann, 2003; Lawhon & Cobb, 2002; Payne, Whitehurst & Angell. 1994; Stephenson, Parrila, Georgiou & Kirby, 2008; Haney & Hill, 2004; Evans, Shaw & Bell, 2000; Stephenson et al. 2008; Manolitsis et al., 2009; Kim, 2009) . Wood (2002) found in a British sample that parents engaged more in shared book reading activities, which can be considered as informal activity, than in activities involving the children's familiarization with letter, which can be considered as direct training. In the same line, Stephenson et al. (2008) found in a Canadian sample that, although parents reported that they were reading to their children approximately once per day, the frequency of teaching letters, sound of letters or words ranged between a few times per week to a few times per month. However, reports of Korean parents in Kim's (2009) study depicted an approximately similar rate of parental engaging in informal and formal activities.

In a comparison of Greek and Canadian parents, it was found that Greek parents had lower parental academic expectations considering their children's preschool skills acquisitions. As a result it was more likely to engage more often in activities that don't include a formal way of teaching skills (Manolitsis et al., 2009; LeFevre et al., 2010). However, more generally, based on anecdotal evidence (i.e., through personal experiences with Greek parents) the last years there is an increasing interest from the Greek parents regarding their children preschool skills acquisition and as a result they seem to try more and more to teach to their children those

skills. Thus it will be interesting to examine if Greek parents use more informal than formal activities and whether they have started to alternate their home learning practices.

The factors that influence formal and informal home learning activities

In previous studies many factors that are related to home environment have been pointed out. Regarding children's home learning experiences the socio- economic status of the family seems to be an important factor (Steensel, 2006; Phillips & Lonigan, 2009). For example, Phillips and Lonigan (2009), in a big and multicultural sample, found that there are three different profiles that indicate the parental frequency of home literacy behaviors per week.

The first group, which included parents with low SES back ground, presented low or modest frequency on both informal and formal directed activities. The second group, which included parents with high SES background, showed high frequency on both types of activities. Finally, the third group included parents who were between group 1 and 2 but they were significantly different from both. This group presented low frequency in informal activities but high frequency in formal activities.

Other characteristics of the home environment that are related to children's home learning experiences are the parental beliefs, attitudes and expectations. Based on inductive reasoning it is expected that parents with more positive beliefs, attitudes and experiences towards literacy, are more likely to engage more often in activities that they enjoy and that tend to formal literacy home learning activities, in order to teach their children the skills that they believe are important for their literacy development (LeFevre et al., 2010; Skwarchuk, 2009; Stephenson et al., 2008). However, parental beliefs and expectations can be alternated significantly across different cultures (Kim, 2009; LeFevre et al., 2009; Zhou et al., 2006; Manolitsis et al., 2009). For example, LeFevre et al. (2010) found that there are differences in parental expectations and beliefs between Greek and Canadian parents. Namely, although in both countries the indicated preschool skills were rated as important or very important, Canadians had higher expectations than Greek parents in 6 pre-school skills.

This study

Taking into account that the two different types of home learning activities, informal and formal, can influence different aspects of children's cognitive development, this study was aimed to examine the relation between these two types and the factors that can influence them and as a consequence, children's cognitive development. Additionally, as few studies were conducted using Greek participants, the current sample consisted of Greek parents in order to add something to the previous literature and provide more knowledge regarding the home learning activities of Greek parents with their children.

The main research questions that merge are:

- ✓ Is there a relation between formal and informal activities?
- ✓ Which activity type is the most frequent among Greek participants?

Additionally:

- ✓ Which factors are related to informal and formal activities?

It was hypothesized that informal and formal activities will not be related with each other (Senechal & LeFevre, 2002; LeFevre et al., 2009; Skwarchuk, 2009; LeFevre et al., 2010). Secondly, it was expected that Greek parents will engage more often in informal activities than in formal. This hypothesis was based on the previous literature, which indicates that parents are more likely to engage in informal activities than in formal (Wood, 2002; Stephenson et al., 2008; Manolitsis et al., 2009; LeFevre et al., 2010). Finally, it was expected that the factors that will be related to home learning activities will be the socioeconomic status of the family, the parental beliefs, attitudes and expectations. More specifically, parents with low SES will engage more in formal learning activities than parents with high SES (Phillips & Lonigan, 2009). Also, parents with positive beliefs and higher expectations will engage more in formal learning activities than parent's with less positive beliefs and lower expectations. (LeFevre et al., 2010)

Method

Participants

A total of 79 Greek parents participated in this survey. Parents came from different towns of Greece, providing a representative sample of the Greek population. Almost half of the parents (55,70 %) were highly educated. Girls constituted almost half of the sample (51,9 %) and children's mean age was 5 years.

Materials and Procedure

Participants were recruited either through personal contacts or through kindergartens in Greece. They received the Questionnaire for the Home Literacy & Numeracy Environment via email and returned their answers via email. Based on LeFevre and Senechal (2002), parental reports on the frequency of teaching reading and writing letters and words were used as an indicator of formal activities and story-book exposure was an indicator of informal activities.

Questionnaire for the Home Literacy and Numeracy Environment (HLE). Parents completed the Questionnaire for the Home Literacy and Numeracy Environment. The questionnaire was used to assess the demographic information of the parents and the children

such as the age of the children and the parental SES, parental beliefs and parental attitudes towards mathematics and literacy. It was also used to assess the frequency of home learning teaching activities. The questions which were included in the questionnaire compiled from a variety of sources (e.g. LeFevre et al., 2009; Senechal & LeFevre, 2002; LeFevre et al., 2010). As the present study was part of a bigger project, the HLE questionnaire included also questions that weren't included in the later analysis, because they weren't relevant to the present research questions.

More specifically, home learning activities between the parents and the children were assessed via 27 items, measured on 5-point scales, (0="activity never occurred", 4= "activity occurred almost daily"), (e.g. " In the past month how often did you and your child engage in counting out money or naming the alphabet letters or playing board games or reading words?"). From those 27 items, 4 items were used to conduct the direct activities (see Appendix A).

Additionally, parental beliefs were measured as the parental "agreement" on 7 statements about math and reading and on 3 statements about their thoughts on their responsibility regarding teaching their children various skills (1= "strongly disagree" and 4= "totally agree", e.g. "When I was in school, I was good at language arts activities such as reading", "I find mathematics activities enjoyable", "I think it is the parents' responsibility to teach their children mathematics"). For this study, 3 items composed the parental beliefs (see Appendix A). The reliability was Cronbach's α= .499

Finally, parental expectations, about the acquisition of a variety of skills before entering kindergarten, were assessed through 16 items. In the current study 8 items composed the parental expectations (see Appendix A). Cronbach's α for this scale equaled .916.

The items that were grouped as the indicator of formal activities, with Cronbach's α= .844, are presented in Table 2. The story book exposure was used as an indicator of informal home learning activities (Senechal & LeFevre, 2002).

Table 2

Scale of direct home learning activities

Direct teaching activities
1. Reading words
2. Printing alphabet letters
3. Printing words
4. Learning the names of alphabet letters

Children's Book Check List. Based on Senechal's (1996) study, in order to examine the book exposure experiences of the children the Child Book Check List was used. This test was designed by finding the most popular children's books in Greece, appropriate for ages 4 to 8 years. Bestselling lists of four major Greek bookstores, one Greek web shop (www.Perizitito.gr) and a list with the most famous storybooks according to Greek parents which was available online in the same website, were compared. Afterwards, the books in common were selected. Fake book titles were included, after verifying that the titles did not exist. The final test consisted of 43 story book titles and 10 fakes. Parents had to indicate how many story book titles they knew. In the Children's Book Check List, parents were awarded one point for choosing a real book cover and they were deducted by a point for choosing a fake cover.

Results

Parental responses

As it can be seen in Table 1, the mean frequency of formal home learning activities is higher than the mean frequency of informal activities. In order to asses parental academic expectations, parents were asked to indicate how important is for their children to acquire a variety of academic skills before entering kindergarten. Most of the Greek parents, over 80% rated most of those skills as important. Moreover, it is seemed that Greek parents believe that it is their responsibility to teach their children those skills. Nearly 80% of them responded as "agreed" in the parental beliefs scale. Finally, parental working hours were relatively high since the basic working hours in Greece sum up to around 40 hours per week per parent.

Table 1

Mean reported frequencies of activities between parent and child, book exposure, parental educational level and parental working hours.

	N	Mean	Sd
Formal activities	79	8.8	4.5
Parental expectations	79	25.9	6.3
Parental beliefs	79	10.2	1.3
Informal activities	79	5.4	4.9
Parental working hours	79	75.9	23.0

Notes: The scale for formal activities is: 0 = "didn't occur"; 1= "less than once a week, but a few times a month"; 2= "about once a week"; 3= "a few times a week"; 4= "almost daily". The scale for parental beliefs is: 1= "strongly disagree"; 2= "disagree"; 3= "agree"; 4="strongly agree". The scale for parental expectations is: 0-4 with 0= "not important" and 4= "very important".

A paired samples *t* test revealed a statistically significant difference between the mean use of formal home learning activities ($M = 8.8$, $sd = 4.5$) and informal home learning activities (M = 5,4 sd = 4.9) that the Greek parents use, $t(78) = -4.659$, $p < 0.05$. Namely, it was indicated that Greek parents use more often formal home teaching activities. This result doesn't support our second hypothesis, that parents will use informal home learning activities more often. However, this result supports our first hypothesis that the two types of home learning activities will not be related.

Correlations

Correlations among the two types of home learning activities and the background variables (age, gender, parental educational level and parental working hours) and parental expectations, beliefs are presented in Table 3.

Table 3

Correlations between the two types of teaching activities and the various factors.

Variables		1	2	3	4	5	6	7
1.	Formal activities							
2.	Story book exposure	.08						
3.	Parental expectations	.33**	-.37**					
4.	Parental beliefs	.22*	-.02	.20				
5.	Gender[1]	-.09	-.12	.09	-.04			
6.	Age	.43**	.01	.04	-.11	-.17		
7.	Parental educational level	-.04	.22*	-.07	.04	-.10	-.01	
8.	Parental working hours	-.01	.00	.00	.00	.05	.03	-.25*

*p< .05, two tailed. **p < .01, two tailed.

[1] Coded as 1 for girls and 2 for boys.

The correlations among the home teaching activities and the other variables indicate a significant positive relation between parental expectations and formal activities but a significant negative relation with story book exposure. Furthermore, parental beliefs were correlated positively with formal activities but not with book reading. The age of the child was also positively related to formal activities, while parental educational level was related positively only to story book exposure.

In Table 3, it can also be seen that story book exposure is not significantly related to direct home learning activities (r= .08), which provide, once more, support for the hypothesis that the two types will be unrelated with each other like in previous studies (Senechal & LeFevre, 2002; LeFevre et al., 2009; Skwarchuk, 2009; LeFevre et al., 2010).

Regression analyses

A hierarchical regression analysis was used to relate the parental expectations and beliefs to the dependent variables of the formal and informal home learning activities, controlling for other background variables, such the age of the child and parental SES. In both regression analyses, the first step included all the background variables, the gender and age of the child and the parental educational level and working hours. Based on Table 3, the second step included parental expectations first and not parental beliefs, because it was shown that parental expectations are related significantly with both formal and informal activities, while parental beliefs were significantly related only with formal teaching activities. Thus, the third step included parental beliefs. Finally, even though there was no correlation between the two

types of activities, the forth step included them in order to find if there was any relation between them, while all the other factors were held constant.

   Formal teaching activities. As it is presented in Table 4, with all other variables held constant, this model accounted for a significant 19% of the variation in the formal teaching activities. Parental expectations (step 2) accounted for an additional significant 10 %. Parental beliefs (step 3) accounted for a significant additional 4%. Finally, book exposure (step 4) accounted for a significant additional 4,7 %. The final model accounted for the 33% of the variation. In the final model, the effects of parental expectations $(t(72) = 3.50, p < 0.05)$, parental beliefs $(t(72) = 2.12, p < 0.05)$, the age of the child $(t(72) = 4.50, p < 0.05)$ and story book exposure $(t(72) = 2.32, p < 0.05)$ were significant.

Table 4

Hierarchical Regression Analysis for Direct teaching activities.

	Predictors	R^2 change	B	Std. Error	β	t
				Final model statistics		
Step 1	Background variables	.191*				
	Age		2.19	.54	.42	4.03*
	Gender[1]		-.20	.96	-.02	-.21
	Parental educational level		-.45	.99	-.05	-.45
	Parental working hours		-.00	.02	-.04	-.42
Step 2		.102*				
	Parental expectations		.22	.07	.32	3.23*
Step 3						
	Parental beliefs	.043*				
			.72	.33	.21	2.15*
Step 4						
	Story book exposure	.047*				
			.21	.09	.24	2.32*

Note. For final model, $F(7,71) = 6.27$, $p < 0.05$.

[1] Coded as 1 for girls and 2 for boys.

*$p < 0.05$.

Indirect home learning activities. As it is shown in Table 5, with all the other variable held constant, background variables (block 1) accounted for a non significant 6% of the variation in informal home learning activities. Parental expectations (block 2) accounted for a significant 12% whereas parental beliefs (block 3) did not explain additional variance (1%). Finally, a significant improvement to the model was provided by formal activities (block 4) with accountancy of an additional significant 17%. The final model accounted for the 24,9% of the variance of the informal home learning activities, with only formal activities ($t(79) = 2,32$, $p < 0.05$) and parental expectations ($t(79) = -3.99$, $p<0.05$) predicting significantly the use of informal activities.

Table 5

Hierarchical Regression Analysis for Informal Teaching Activities.

Predictors		R^2 change	Final model statistics			
			B	Std. Error	β	*t*
Step 1	Background variables	.065				
	Gender[1]		-1.06	1.13	-.10	-.93
	Age		-.01	.64	-.00	-.01
	Parental educational level		2.28	1.17	.22	1.94
	Parental working hours		.01	.02	.06	.55
Step 2		.126*				
	Parental expectations		-.28	.08	-.35	-3.36*
Step 4		.175*				
	Direct activities		.32	.13	.29	2.32*

Note. For final model $F(7,71) = 3.36$, $p < 0.05$.

[1] Coded as 1 for girls and 2 for boys.

*$p < 0.05$.

Comparing the two regression analyses, it was found that, with all the other variables held constant, both formal and informal activities are influenced by parental expectations as well as by each other. However, there was a positive influence between parental expectations and formal activities, while the influence of parental expectations to informal activities was negative. Namely, parents with higher expectations, regarding their children's skills acquisition before elementary school, tend to use more formal home learning activities and less informal activities. Finally, although the two types of activities were uncorrelated, they positively predicted each other. Parents who use direct home learning activities use indirect as well.

Discussion

Previous studies have indicated that home learning activities can influence, positively or negatively children's literacy development. In the present study, home learning activities were separated in two categories, formal and informal. Formal activities represented those in which there was direct teaching of skills from an adult to the child, while informal activities were those in which the child can learn or develop a skill, with an activities, which isn't aimed in direct teaching, like board games. (Senechal et al., 1998; LeFevre, et al., 2009; Phillips &

Lonigan, 2009). Parents were asked to complete a questionnaire about the frequency of formal activities between them and their children. Additionally, they completed the Book Cover Recognition Test in order to rate their familiarity with child's Greek literacy, which was used as an indicator for informal activities. The main goal of this study was to investigate the relation between formal and informal literacy home learning activities and to examine which type is more preferred among Greek participants.

Among Greek parents, formal and informal activities are not related; parents might often read to their child but not do any formal teaching, or vice versa. Greek parents present high expectations, as more than 80% of them rated the acquisition of the given preschool activities as important. Additionally they have positive beliefs, as nearly 80% of them believe that it is their responsibility to help their children with their language development. Finally, they engage more often in formal home teaching activities than in informal. Parental expectations and beliefs and the child's age seem to predict positively formal activities but a similar relation is not presented for the informal, which are negatively predicted only by parental expectations. As it was seen, they have high expectations regarding their children's academic skills before entering kindergarten and they also highly believe that it is their responsibly to prepare them for that. Thus, they choose to teach their children those skills, using more often formal home learning activities than informal. It seems that Greek parents tend to take the situation "in their hands" as their children get older and approach entering elementary school.

More specifically, the first research question referred to whether there is a relation between the two types of activities. It was hypothesized that the two types will be uncorrelated. A correlation analysis and a paired t-test analysis provided support to this hypothesis, indicating a significant difference between the two types. This result is in the same line with previous finding (Senechal & LeFevre, 2002; LeFevre et al., 2009). However, it was also found that both types could significantly and positively predict each other. To illustrate, Greek parents seem to use informal activities along with formal activities, but with formal activities being used more frequently. This is a new finding because, whereas Kim (2009) and Hood (2008) found a correlation between formal and informal activities, they didn't examine further if and how can affect each other, as it was conducted in this study. Thus, more research is needed in the future in order to clarify the relation between the two types of home learning activities.

The second research question in this study was aimed on whether Greek parents use more formal or informal home learning activities. In previous studies, it was depicted that parents engage more frequently in informal home learning activities (Wood, 2002; Stephenson et al., 2008; Senechal & LeFevre, 2002). However, a few studies included Greek participants as their sample. A paired t- test analysis showed that formal activities are used more often. This finding, however, is in contrast to the findings of LeFevre et al., (2010), who found that Greek parents engage more in informal activities. A possible explanation for this can be the

difference in methodology between the two studies. In LeFevre et al., (2010) study, only parental reports were used as an indicator of either formal or informal home learning activities. In contrast, in the present study, parental reports were only used as an indicator for formal activities, while storybook exposure was used as an indicator of informal activities.

Additionally, parents with higher expectations use more formal home learning activities and the same applies also to parental beliefs. However, parents with higher educational level tend to use more informal home learning activities, although parental educational level is not related at all either with parental expectations or with parental beliefs. Finally, as the child grows, parents use more formal home learning activities.

The third research question was questioning the factors that can influence the formal and informal home learning activities among the Greek participants. Many factors that can influence the choice of the type of home learning activities have been pointed out (Phillips & Lonigan, 2009; LeFevre et al., 2010; Stephenson et al., 2008). It was hypothesized that the socioeconomic status of the participants and the parental expectations and beliefs will significantly predict the use of either of the two types.

Formal home learning activities

It was found that formal home learning activities can be significantly predicted by parental expectations and parental beliefs. Parents with higher expectations and more positive beliefs towards literacy are more likely to engage in formal home learning activities. This result is in the same line with previous studies (Stephenson et al., 2008; Skwarchuk, 2009).

Neither of the two Socio- economic status indicators- parental education and parental working hours- predicted significantly the use of formal home learning activities. Greek parents use formal home learning activities regardless their own educational background. This finding is in contrast to some of the previous studies (Steensel, 2006; Phillips & Lonigan, 2009), but it is in the same line with some others, in which there was no relation between parental education and formal home learning activities (Evans et al., 2000; Senechal & LeFevre, 2002). However, there wasn't sufficient variance in educational background, as the majority of the parents in both studies were highly educated.

Finally, it was found that the age of the child can also significantly predict formal activities. Greek parents tend to use more formal home learning activities as their children grow up and they approach school. Thus, it seems plausible that Greek parents have greater expectations as their children grow up and approach entering school However, most of the previous researches didn't find any significant connection between the child's age and direct activities (Stephenson et al., 2008; Hood, 2008; LeFevre et al., 2010). More specifically LeFevre et al., (2010) suggested that Greek parents are less concerned than Canadian parents regarding their children's preparation for school, thus they are not using as often as Canadian parents formal activities. However, in the current study, there is no comparison between

cultures and also child's age was included in a regression analysis, unlike LeFevre et al.' (2010) study. Instead, they only used they frequency of parental reports considering the formal activities.

Informal home learning activities

In contrast to formal activities, informal activities were predicted significantly only by parental expectations and also in a negative way. Whereas it is logically expected that parents with higher expectations about their children's academic skills, will seek out for more structured activities, instead of informal activities, this finding is not supported by previous researches as in Stephenson et al., (2008). Investigating a Canadian sample, they did not find any connection between parental expectations and informal home learning activities. Further research is needed in order to clarify if and then how informal activities can be predicted by parental expectations

Even though this study is one of the few new studies focusing specifically on the two different types of home learning activities, further work is needed to conclude regarding the factors that can predict parents' choice to engage more in formal literacy activities over, or additional to, in informal literacy activities. Also, it may be important to explore more deeply the relation between the two types. Finally, taking into consideration that only few studies used Greek participants, it may be more important the future studies to focus on Greek samples.

Limitations

The methodology used in this study had limitations. More specifically, parents' self reports may be influenced by social desirability and not reflect accurately their true behavior. However, in all of the four activities Greek parents presented a relatively high percentage of answers "the activity didn't occur". Additionally, the low scores in the Children's Book Check List may reveal a problem in the test. Although the books included in the test were selected by a variety of sources, it may be the case that Greek parents weren't that familiar with these books. Both the questionnaire and the Children's Book Check List were self constructed and not standardized, so they may not have captured all the variability in children's formal and informal home learning experiences. Finally, the reliability for the scale of parental beliefs was very low. Although there weren't any other questions in the questionnaire measuring the parental beliefs regarding literacy, it is very important to add more relevant questions in the future studies.

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Appendix A

- Questions that composed formal home learning activities:

In the past month, how often did you and your child engage in the following activities? *Circle 0 if the activity did not occur, 1 if it occurred less than once a week, but a few times a month (1-3 times), 2 if it occurred about once a week, 3 if it occurred a few times a week (2-4 times) and 4 if it occurred almost daily.*

1. Reading words	0	1	2	3	4
2. Printing alphabet letters	0	1	2	3	4
3. Printing words	0	1	2	3	4
4. Learning the names of alphabet letters	0	1	2	3	4

- Questions that composed parental expectations:

In your opinion, how important is it for children to reach the following benchmarks prior to entering kindergarten? *(Circle 0 if not important and 4 if very important).*

1. Rehearse the alphabet	0	1	2	3	4
2. Read a few words (e.g. mom or dad)	0	1	2	3	4
3. Identify/recognize some alphabet letters	0	1	2	3	4
4. Know all the alphabet letters	0	1	2	3	4
5. Print all the alphabet letters	0	1	2	3	4
6. Print some alphabet letters	0	1	2	3	4
7. Know some alphabet letters	0	1	2	3	4
8. Print his / her name	0	1	2	3	4

- Questions that composed parental beliefs:

Please read the following statements. Using the following four-point scale, please indicate the degree to which you agree with the statement by circling the appropriate box.

	Strongly Disagree	Disagree	Agree	Strongly Agree
It is important for my child to be read to every day.	1	2	3	4

The following questions relate to your thoughts on education and teaching.				
Please indicate how much you agree with the following sentences.				
	Strongly Disagree	Disagree	Agree	Strongly Agree
… to express oneself well with language	1	2	3	4
… reading and writing	1	2	3	4