

A Decade of Early Literacy Research Trends in Turkey: A Thematic Review*

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Abstract

Early literacy skills, which are the processors of literacy skills, set down roots during the early childhood period. In general, the developed countries apply home-based and school-based programs for the purpose of raising the next generations as competent literate individuals in the preschool period. Many studies have been performed all around the world in order to monitor the developments of early literacy skills and to examine the effect of different programs carried out. It is observed that in Turkish National Preschool Education Programs (PEP), the importance given to the emergent literacy skills and acquisitions of Turkish Language activities has been gradually on the increase. While the number of studies conducted within this field is likewise increasing, to our knowledge, no studies concerning thematic analyses carried out regarding early literacy skills were encountered in national context. Therefore, the aim of the present study is to examine the research trends in the field of early literacy in the last decade in Turkey. In this study, a thematic review approach was used to examine the articles and the theses published between the years of 2006 and 2016 regarding early childhood education programs. The study sample consisted of 99 theses and 112 articles. A publication classification form was used to examine the studies. The publication classification form consists of three dimensions: descriptive characteristics, methodological features, and content features. Whitehurst and Lonigan's (1998) conceptual model was used to examine the content of the articles and theses. The findings showed that the number of early literacy studies has increased in the last decade. Those skills identified as "inside-out" have been studied more in recent years, however there are fewer studies in general. The findings are discussed in the related literature and recommendations were addressed for further studies.

Keywords: early literacy skills, thematic review, early childhood education programs

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Erken Okuryazarlık Alanında Türkiye’de Son On Yıllık Araştırma Eğilimleri: Tematik Bir İnceleme

Öz

Erken okuryazarlık becerileri, yaşamın 0-5 yaş arası döneminde gelişen ve ilköğretim yıllarındaki okuma becerilerinin öncülü olan bilgi, beceri ve tutumlardır. Gelecek nesilleri yetkin okuryazar bireyler olarak yetiştirmek amacıyla, gelişmiş ülkeler okul öncesi dönemde erken okuryazarlık becerilerini destekleyici ev-içi ve kurum temelli çeşitli eğitim programları yürütmektedirler. Çocukların erken okuryazarlık beceri gelişimlerini takip edebilmek ve uygulanan eğitim programlarının etkisini belirlemek amacıyla dünya çapında çok sayıda araştırma yürütüldüğü görülmektedir. Bu alanda ülkemizdeki mevcut durum değerlendirildiğinde yenilenen Okul Öncesi Eğitim Programı’nda (2013) erken okuryazarlık becerilerine ve Türkçe dil alanındaki kazanımlara giderek daha fazla yer verildiği gözlemlenmektedir. Okul Öncesi Programı’nda erken okuryazarlık becerilerine ilişkin yer alan kazanımların sayısındaki artışa paralel olarak da bu alanda yapılan araştırma ve tezlerin artması beklenmektedir. Ulusal alanyazın incelendiğinde; erken okuryazarlık becerileri ile ilgili yapılan çalışmaları tematik olarak inceleyen bir araştırmaya rastlanmamıştır. Bu çalışmanın amacı, erken okuryazarlık alanında son on yılda Türkiye’de yürütülen çalışmaların hangi erken okuryazarlık becerilerine ağırlık verdiğini ortaya koymak ve bu bağlamda son yıllarda hâkim olan araştırma eğilimlerini belirlemektir. Bu çalışmada tematik analiz yöntemi kullanılarak 2006-2016 yılları arasında yayınlanmış toplam 99 tez ve 118 makale, Okul Öncesi Eğitim Programı’nda (2013) yer alan kazanımlar göz önüne alınarak incelenmiştir. Araştırma kapsamına alınan makale ve tezler, betimleyici özellikler, metodolojik özellikler ve içerik özellikleri bakımından incelenerek sınıflandırılmıştır. Çalışmaların içerik özellikleri açısından yapılan sınıflandırmalarda Whitehurst ve Lonigan’ın (1998) kavramsal modeli temel alınmıştır. Bu modelde yer aldığı gibi erken okuryazarlık becerileri içten-dışa ve dıştan içe olmak üzere sınıflandırılmıştır. Araştırma sonucunda, "içten-dışa" olarak tanımlanan harf-ses ilişkisi, sesbilgisel farkındalık ve yazma becerileri; "dıştan içe" olarak tanımlanan hikâye anlama, dil becerileri, kelime ve kavram bilgisi becerilerine oranla daha az çalışıldığı görülmüştür. Ancak, harf-ses ilişkisi, sesbilgisel farkındalık ve yazmaya yönelik çalışmaların son zamanlarda giderek arttığı da gözlemlenmiştir. Araştırma kapsamına incelenen çalışmaların betimleyici ve metodolojik özellikleri alanyazında yer alan diğer araştırma bulguları ışığında tartışılmış ve gelecek çalışmalar için öneriler sunulmuştur.

Anahtar Sözcükler: erken okuryazarlık becerileri, tematik inceleme, okul öncesi eğitim programı

Introduction

To fully participate in today's world, literacy skills are survival skills. In the digital age, individuals need to use a set of complex literacy skills, not only in the workplace but also in daily life (Plomp, 2013; Nutbeam, 2008; Tyner, 2014). Reading is a complex mental process in which the reader constructs his or her own meaning from text by decoding the print (Akyol, 2012; Coltheart, 2010). According to Scarborough (2001), competent readers perform word recognition and language comprehension in the reading process reciprocally. The reader gains the automation of word recognition skills, vocalizes written text by decoding print, and uses language comprehension skills in a strategic manner to construct meaning from the text. Reading skills are acquired in a process linked to the child's cognitive, physiological, and social development. The development of these skills is taken its root in the early childhood period (Cunningham, 1990; Güneş, 2007). According to the Reading Rope Model of Scarborough (2001), phonological awareness, alphabet principles, and sight word recognition are components of the word recognition process, whereas vocabulary, verbal reasoning, print concepts, background knowledge, and language structure skills are components of the language comprehension process (Scarborough, 2009). The longitudinal link between early literacy skills and later reading skills has been examined in previous studies (Lonigan, Farver, Nakamoto, & Eppe, 2013; Ouellette, 2006; Pullen & Justice, 2003; Riedel, 2007; Su et al., 2017). In addition, the results of the American Early Literacy Panel (NELP) (2008) meta-analysis study showed that early literacy skills such as phonological awareness, letter identification, print awareness, vocabulary, oral language skills, and concepts about print are precursors of later reading skills.

Early Literacy Skills

Early literacy skills are defined as those skills, knowledges, and attitudes that develop in the age range of 0–5 years and are the predictors of later reading skills (Teale & Sulzby, 1986; Whitehurst & Lonigan, 1998). Whitehurst and Lonigan (1998) proposed a conceptual model for explaining early literacy skills and their associations to future reading skills. According to Whitehurst and Lonigan (1998), early literacy skills consist of two different, but closely related, domains: “outside-in” and “inside-out.” Table 1 presents the Conceptual Model of Early Literacy Skills in details. In addition they addressed the skills required for the fluent reading process in five units. These are contextual, semantic, language, sound, and writing units. The outside-in domain represents the skills that children use in constructing meaning from what they read based on the context, whereas the inside-out domain represents the skills used in the word recognition process. The main early literacy skills and their scopes are briefly described below.

Story Comprehension refers to the ability to find the main and the most important idea in a story, to determine the cause and effect relation between events, to understand the story plot correctly, to find the links in the text, and to relate these connections with the reader's own interpretation and to summarize the events in the story (Paris & Paris, 2003; Stein, 1978).

Language Skills cover listening, speaking, reading, and writing skills (Morrow, 2009; Otto, 2006). Language skills are divided in two parts: expressive and receptive language skills. Oral language skills also include grammar, vocabulary, and pragmatics (Cabell, Justice, Logan, & Konold, 2013).

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Table 1. *Conceptual model of early literacy skills (Whitehurst & Lonigan, 1998)*

Outside-In Skills	Inside-Out Skills
Story Comprehension	Letter-sound correspondence
Language Skills	Phonological Awareness
Vocabulary	Writing
Concept Knowledge	

Vocabulary refers to word knowledge that children can understand, use in their daily conversation, and understand when they read, or words they say, write, or say when they listen to others (Armbruster, Lehr, & Osborn, 2001; Christ & Wang, 2010; Sever, 1995).

Phonological Awareness refers to the ability to identify, substitute and blend sounds and also being able to segment spoken words into sound units such as initial sounds, syllables, and final sounds (Gillon, 2004; Lane & Pullen, 2004; Yopp & Yopp, 2009).

Print Awareness refers to knowledge that children can understand the concept that print represents oral language and it transfers a message (Clay, 2000).

Concepts about Print is to be aware of the book covers and page orientation of the books, plus to understand that the text moves from left to right in Turkish, and there are spaces between words and sentences (Clay, 2000).

Letter Knowledge refers to alphabetical knowledge of the names of the letters and knowing that each sound has a correspondence to the written system (Armbruster, Lehr, & Oshorn, 2001).

Educational Programs to Develop Early Literacy Skills

Learning how to read is a complex process and contains wide range of skills such as oral language, vocabulary, identifying sounds, letters, and decoding. Recent research shows that oral language skills, and vocabulary are as effective as letter knowledge, decoding for later reading achievement (Dickonson, Golinkoff, & Hirsh-Pasek, 2010; Muter, Hulme, Snowling, & Stevenson, 2004). The developed countries such as the USA, Canada, and England apply home-based and school-based early literacy programs for the purpose of raising the next generations as competent literate individuals in the preschool period. The developed countries formed early literacy programs, such as Early Reading First (2005 – USA), Grow Start Grow Smart (2002 – USA), Read to Me! (2002 – Canada), Read for Life (2005 – Canada), and Raising Early Achievement in Literacy (1995 – England) (Balla-Boudreau & O'Reilly, 2002; Evangelou & Sylva, 2003; Israel, 2007). In addition, the National Association for the Education of the Young Children (NAEYC) (1998) published a position statement on developmentally appropriate literacy education for young children. The position statement firstly pointed out the importance of the early literacy skills for later reading skills. Secondly, the early literacy skills were explained under the three developmental levels: a) birth through preschool, b) kindergarten, and c) primary grades. Lastly, teaching practices were recommended for each developmental level.

Numerous studies have been performed all around the world in order to follow-up the progress of young children's early literacy skills and to examine the effect of different programs that have been carried out. When examining the related literature, the majority of the early literacy studies were conducted in English as compared to other languages (NELP,

2008). However, every language has its own language rules. For example, English has a deep orthography whereas Turkish language has a shallow orthography (Rayner, Pollatsek, Ashby, & Clifton, 2012). Therefore, there is a need to study early literacy skills, the relations among the skills, and their predictable relations with later reading skills in the Turkish language. Despite the orthographic characteristics, early literacy skills as the roots of later reading achievement should be examined in an extensive way.

In the national context, it can be said that that acquisitions related to early literacy skills are gradually increasing. When the National Preschool Education Programs (PEP) was examined, it was seen that phonological awareness skills have been included since 2006. The current PEP (2013) includes more detailed acquisitions and indicators relating to early literacy skills, such as reading and writing awareness. At the same time, the program does not cover any acquisitions related to letter knowledge. The program stressed out that “the program certainly does not aim to teach reading and writing to children and does not cover any goals for children to be introduced to letters and learn to write letters” (PEP, 2013, p. 45). Detailed information regarding the scopes of the former and the current PEPs language domain is given in Table 2.

Table 2. *Comparing National Preschool Education Programs regarding language development domain scopes*

National Preschool Education Program (2006) Language Domain Objectives	National Preschool Education Program (2013) Language Development Acquisitions
1. Being able to segment the sounds	1. The child segments sounds
2. Being able to use the sound suitably while speaking	2. The child uses his/her voice appropriately
3. Being able to use Turkish properly	3. The child forms a sentence using the rules of syntax
4. Being able to express himself/herself in words	4. The child uses grammar rules correctly while speaking
5. Being able to express the things he/she listens to in different ways	5. The child uses language for communicative purposes
6. Being able to develop his/her vocabulary	6. The child enriches his/her vocabulary
7. Being aware of phonemes	7. The child grasps the meaning of what he/she has listened to and watched
8. Being able to read the visual materials	8. The child expresses what he/she has listened to and watched in various ways
	9. The child develops phonological awareness
	10. The child reads visual materials
	11. The child shows an awareness of reading
	12. The child shows an awareness of writing

As can be seen in Table 2, the scope of early literacy skills was broadened in the PEP and the inside-out early literacy skills are introduced in the program. Furthermore, early literacy studies are emerging and represent a hot research topic in Turkey (Altun, 2016). The number of studies conducted within this field has been increasing gradually over the last decade. Therefore, it is important to examine the possibility of extending the early literacy scope and new early literacy skills in PEP in a way that reflects early literacy research over the last decade.

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A growing number of thematic review studies have been conducted in different research areas to gain general view about the specific research topics (Grubb, 2006; Ormanci, Cepni, Deveci, & Aydin, 2015; Press & Hayes, 2000; Ültay & Çalık, 2012; Simon & Daneback, 2013). In the national context, a limited number of studies have examined theses (Ahi & Kıldan, 2013; Altun, Öneren Şendil, & Şahin, 2011; Demirtaş İlhan, 2017; Ramazan & Balat, 2007) and articles (Yılmaz & Altınkurt, 2012) conducted in the field of early childhood education.

In addition, some studies focused on a specific research topic, such as play (Kaytez & Durualp, 2014), drama (Can Yaşar & Aral, 2011), science (Ozen Uyar & Ormancı, 2016), mathematic (Bağcı & İvrendi, 2016) special education (Gül & Diken, 2014; Taştepe et al., 2016), social skills (Ogelman, 2014), and environmental education (Ogelman & Güngör, 2015). In this respect, when the national literature is examined, no study was encountered concerning thematic analysis of the studies carried out regarding early literacy skills. Therefore, it is the aim of this study to examine the research trends in the field of early literacy in the last decade in Turkey. The study presents general information about researches carried out in the field of early literacy in the last decade in our country to the researchers, and the educators are given an opportunity to evaluate the researches from a thematic aspect, which will enable comparisons with international research trends. In order to attain the goals of the present study, the following research questions were investigated:

- 1) What are descriptive characteristics of the studies in early literacy field in Turkey?
- 2) What are methodological characteristics of the studies in early literacy field in Turkey?
- 3) Which early literacy skills were examined in early childhood period in Turkey?

Method

Research Model

In this study, a qualitative research design was used to examine the articles and the theses published between the years of 2006 and 2016 (until March 2017) regarding early literacy skills in Turkey. A thematic review approach was used to analyze the data. Thematic review studies are given a clear outline related to the general, methodological, and content features of the conducted research. It reveals neglected, emerging, and popular research topics and methods in the literature. The approach was used to examine, classify, and interpret the studies systematically (Vaismoradi, Turunen, & Bondas, 2013).

Participants

A total of 118 articles and 116 theses were identified at the end of the database search process. In order to identify the studies, keywords such as “emergent literacy,” “early literacy,” “kindergarten,” “preschool,” “language development,” and “reading readiness” were typed and the databases “ERIC”, “EBSCHO”, “TÜBİTAK Ulakbim”, “Google Academic”, and “YÖK Thesis Search” were scanned. The research was limited to the preschool period (0–6 age) and the studies that include foreign language education and special education and elementary school children that were not included the study. At the end, six articles and 17 theses were excluded from the study. Finally, the study sample consisted of 112 articles and 99 theses.

Data Analysis Process

A publication classification form was used to examine the studies. The form was prepared based on previous studies (Goktas et al., 2012; Ormancı, Cepni, Deveci, & Aydın, 2015). The publication classification was consisted of three basic dimensions. Firstly, descriptive features such as the name, author, language, and type of the articles and theses were examined.

Table 3. *Thematic review matrix for the data analysis*

Dimensions	Sub-dimensions
Descriptive characteristics	Types of study
	Number of authors
	Language of the study
Methodological Features	Research methods
	Sampling methods
	Sample size/number of participants
Content Features	Outside-in early literacy skills
	Inside-out early literacy skills

Secondly, the research design, sample, and data analysis methods were classified after a detailed examination. Thirdly, early literacy sub-skills were examined by using Whitehurst and Lonigan’s (1998) conceptual model. The detailed information regarding the thematic review matrix is presented in Table 3. The researchers coded the data individually and then calculated the coding consistency between the researchers. Cohen’s Kappa coefficient was calculated between .92 and .95 for the sub-dimensions.

Findings

Descriptive Characteristics of the Studies

In the context of the study, 99 theses were examined. Of these theses, 81.8% were master theses and 18.2% were dissertations. In addition, 112 articles were examined. Of these articles, 28.6% were produced from the theses, and 15 (15.10%) were published in the social sciences citation index (SSCI). The detailed information is presented in Table 4.

Table 4. *Descriptive information of the studies*

	Theses		Produced from Theses	Articles	
	f	%		f	%
Master	81	81.80	No	80	71.40
Dissertation	18	18.20	Yes	32	28.60
Total	99	100	Total	112	100

Concerning the languages of the studies, 91.90% of the theses were written in Turkish, whereas 80.40% of the articles were written in Turkish (see Table 5).

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Table 5. *Distribution of the studies regarding languages*

	Theses		Articles	
	f	%	f	%
Turkish	91	91.90	90	80.40
English	8	8.10	22	19.60
Total	99	100	112	100

As shown in Table 6, a majority of the articles (48.20%) have two authors, 25% of the articles have one author, and 14.30% of the articles have three authors.

Table 6. *Distribution of the articles regarding author numbers*

Author Numbers	f	%
1	28	25.00
2	54	48.20
3	16	14.30
4	5	4.50
5	3	2.70
6	5	4.50
7	-	-
8	1	.90
Total	112	100

Methodological Features of the Studies

Secondly, the studies were examined in terms of research method. As shown in Table 7, most of the theses (52.52%) and articles (37.50%) were survey studies. The second most preferred design was an experimental study, both in the theses (25.25%) and articles (28.75%). On the other hand, a longitudinal study was conducted for at least 1.01% of the theses, while 2.67% of the articles did not specify the study design.

Table 7. *Design of the studies*

	Theses		Articles	
	f	%	f	%
Survey	52	52.52	42	37.50
Experimental	25	25.25	21	18.75
Scale Development	5	5.05	14	12.50
Literature Review	-	-	18	16.07
Correlational	2	2.02	12	10.71
Longitudinal	1	1.01	2	1.78
Not Specified	14	14.14	3	2.67
Total	99	100	112	100

Regarding the subject characteristics of the studies, children were the most frequently used participant groups in theses (44.78%) and articles (59.01%). However, documents such as books, story books, and curricula (17.16%) were the second most preferred subjects in theses. On the other hand, a teacher (17.21 %) was the second the second most preferred participant groups in the articles (see Table 8).

Table 8. *Participants of the studies*

Subjects	Theses		Articles	
	f	%	f	%
Children	60	44.78	72	59.01
Teacher*	20	14.93	21	17.21
Parents	15	11.19	20	16.40
Book, Curriculum, materials	23	17.16	9	7.37
Others	1	0.75	-	-
<i>Total**</i>	<i>134</i>	<i>100</i>	<i>122</i>	<i>100</i>

*pre-service and in-service

**some studies covered more than one participant group

Table 9 presents the frequencies and percentages of the sampling methods used in the studies. Most of the theses (53.53%) and articles (38.39%) did not specify the study sampling method. A total of 31.31% of the theses and 20.53% of the articles used a random sampling method to select the study participants. Purposive sampling was the third most preferred sampling method in theses (8.08%) and articles (9.82%).

Table 9. *Sampling methods of the studies*

Sampling types	Theses		Articles	
	f	%	f	%
Not specified	53	53.53	43	38.39
Random	31	31.31	23	20.53
Purposive sampling	8	8.08	11	9.82
Convenience sampling	5	5.05	7	6.25
Stratified sampling	2	2.02	9	8.03
Snowball sampling	-	-	1	0.89
Not applicable	-	-	18	16.07
<i>Total</i>	<i>99</i>	<i>100</i>	<i>112</i>	<i>100</i>

Concerning the sample size of the studies, a majority of the sample numbers of the theses (40.40%) and articles (40.42%) were between 31 and 100. Of the sample size, 30.30% of the theses and 26.08% of the articles were between 101 and 300. Only 2.02% of the theses and 6.38% of the articles were conducted with fewer than 11 individuals. Detailed information regarding sample sizes of the studies is presented in Table 10.

Table 10. *Sample size of the studies*

Sample size	Theses		Articles	
	f	%	f	%
1–10	2	2.02	6	6.38
11–30	12	12.12	13	13.82
31–100	40	40.40	38	40.42
101–300	30	30.30	24	26.08
301–1000	15	15.15	13	13.82
<i>Total</i>	<i>99</i>	<i>100</i>	<i>94</i>	<i>100</i>

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Lastly, the studies' data analysis techniques were examined. As indicated in Table 11, a majority of the theses (68.92%) and the articles (72.64%) conducted parametric statistics tests to analyze the data. T-test was the most frequently used statistical test both in the theses (24.27%) and the articles (21.70%). On the other hand, 14.56% of the theses and 12.26% of the articles used non-parametric tests to analyze the data. In addition, 16.50% of the theses and 15.09% of the articles used content analysis to interpret the data.

Table 11. *Data analysis techniques of the studies*

Data Analysis Techniques	Theses		Articles	
	<i>f</i>	%	<i>f</i>	%
<i>Parametric Tests</i>				
T-test	25	24.27	23	21,70
ANOVA	23	22.33	22	20.75
Correlation	11	10.68	18	16.98
Regression	6	5.82	6	5.66
ANCOVA	2	1.94	1	0.94
Factor Analysis	3	2.91	5	4.72
SEM/Path Analysis/Multilevel Modeling	1	0.97	2	1.89
<i>Non-Parametric Tests</i>				
	15	14.56	13	12.26
<i>Content Analysis</i>				
	17	16.50	16	15.09
<i>Total</i>	103	100	106	100

Content Features of the Studies

Thirdly, studies were examined regarding research content. Table 12 indicates that the majority of the theses (n = 72) examined outside-in skills. Fifteen of the theses investigated inside-out skills. Similarly 15 of the theses examined other topics related to early literacy. As indicated in Table 12, the inside-out skills have been the focus of the research since 2010 in theses.

The distribution of the research content in articles is presented in Table 13. Similar to the theses, the majority of the theses (n = 100) examined outside-in skills. Of the articles, 93 investigated other topics related to early literacy. Lastly, 53 of the studies examined inside-out skills. Contrary to the theses, the inside-out skills have been addressed in the research since 2007 in articles.

Table 12. *Distributions of the theses conducted in early literacy scope regarding years*

Content*	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total	
<i>Outside-in skills</i>	Story telling & comprehension	-	-	1	-	1	2	1	-	-	2	-	7
	Oral Language Skills	3	-	3	4	1	-	1	1	1	8	1	23
	Vocabulary	1	1	1	3	1	1	5	6	5	11	7	42
	<i>Total</i>	4	1	5	7	3	3	7	7	6	21	8	72

<i>Inside-out skills</i>	Concepts about print & writing	-	-	-	-	-	1	1	-	1	1	2	6
	Phonological Awareness	-	-	-	-	-	-	4	-	1	3	1	9
	<i>Total</i>	-	-	-	-	-	1	5	-	2	4	3	15
<i>Others</i>	Reading Readiness	-	-	-	-	-	-	-	1	1	-	-	2
	Book Review	-	-	2	2	1	-	7	1	3	6	1	20
	Teacher views	-	2	2	-	1	1	-	-	3	2	-	11
	Reading attitude & motivation	-	-	-	-	-	-	-	1	1	-	-	2
	Literacy Environment	-	-	-	-	-	-	-	-	-	1	1	2
	<i>Total</i>	-	2	4	2	2	1	7	3	8	9	2	15

*Some studies covered more than one early literacy skill

Table 13. Distributions of the articles conducted in early literacy scope regarding years

	Content*	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
<i>Outside-in skills</i>	Story telling & comprehension	1	2	-	1	3	-	1	2	1	4	8	23
	Oral language skills	3	2	2	4	4	4	3	3	5	4	7	41
	Vocabulary	-	1	2	3	3	3	2	5	8	5	4	36
	<i>Total</i>	4	5	4	8	10	7	6	10	14	13	19	100
<i>Inside-out</i>	Concepts about print & writing	-	1	-	-	-	-	2	4	5	4	7	23
	Phonological awareness	-	1	1	1	3	3	1	3	8	5	4	30
	<i>Total</i>	-	2	1	1	3	3	3	7	13	9	11	53
<i>Others</i>	Reading Readiness	3	-	-	-	-	1	2	2	3	4	2	17
	Book review	1	-	-	-	-	-	-	1	1	2	4	9
	Teacher views	1	-	-	-	1	-	1	3	2	1	2	11
	Reading attitude & motivation	-	-	-	1	-	-	-	1	-	2	1	5
	Literacy Environment	-	-	-	1	-	-	-	-	1	2	2	6
	<i>Total</i>	5	-	-	2	1	1	3	7	7	11	11	93

*Some studies covered more than one early literacy skill

The percentages of the content of the studies regarding years is also presented in Figure. 1 and Figure 2. Figure 2 shows that outside-in and inside-out early literacy skills were more equally distributed in articles than in theses.

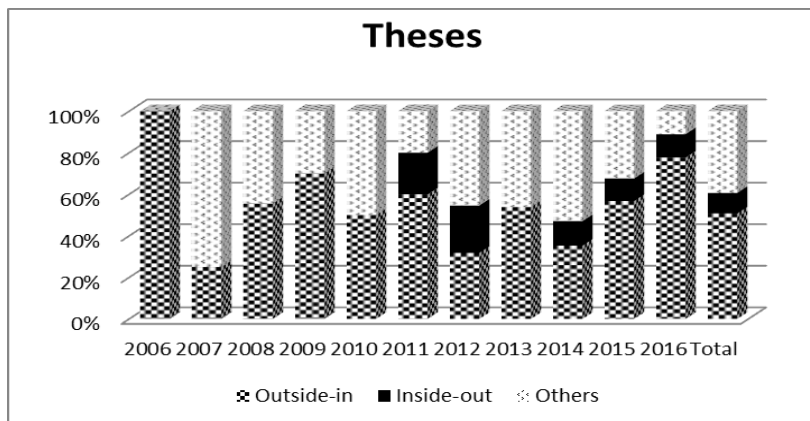


Figure 1. Percentages of the theses content regarding years

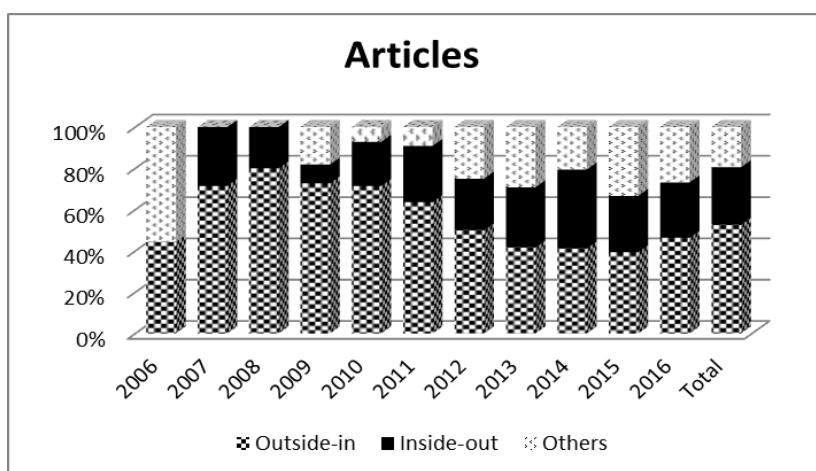


Figure 2. Percentages of the articles content regarding years

Conclusion and Suggestions

A thematic review study provides a big picture of the studies in related fields. It presents a comprehensive summary of the studies and reveals research trends and research gaps for researchers. The study presents the research trends in the field of early literacy during the last decade in Turkey. The findings showed that the number of studies related to early literacy skills has been on the increase in recent years. Haktanır (2007) stated that 44 faculties had early childhood education programs, but in the 2015–2016 academic years the number grew to 66 with 19 master’s and 5 PhD degree programs (Demirtaş İlhan, 2017). The findings were consistent with the previous studies (Demirtaş İlhan, 2017; Özen Uyar & Ormancı, 2016). The increasing number of the study can be explained by the developments in early childhood education programs in universities in recent years.

According to the findings, 15.10% of the papers were published within the scope of SSCI, a percentage that is similar to the findings of Özen Uyar and Ormancı (2016). They found that 16.70% of the science education studies were published in early childhood studies

journals that are in the SSCI index. Regarding the language of the articles examined in the study, 80.40% of the studies were published in Turkish.

The study findings showed that most of the studies were conducted as a survey research. The findings were consistent with the study of Özen Uyar and Ormancı (2016); 20.83% of the studies were surveys and 20.83% of them did not include information regarding the research method. Survey research is aimed at exploring and describing the characteristics of the individuals involved and collecting the data of interest through questionnaires (Check & Schutt, 2012; Ponto, 2015). Cross-sectional survey research is important for determining children's early literacy skills, early literacy experiences, and preschool teachers' early literacy practices and problems, but the findings reveal that there is a need to study early literacy skills longitudinally in the Turkish language, plus the predictable relations among the skills should be investigated. The study findings revealed that T-test and ANOVA are the most common statistical tests used to analyze data. Previous studies similarly reported that the tests are the most frequent statistical techniques to analyze data in early childhood education theses (Ahi & Kıldan, 2013; Demirtaş İlhan, 2017). The tests generate univariate statistics for comparing group means (Tabachnick & Fidell, 2007). However, a limited number of studies used multivariate tests to investigate the degree of relations among variables. In order to facilitate a clearer interpretation of early literacy development in Turkish, further studies can use a broadened range of statistical techniques to examine different numbers and kinds of variables together in single analysis.

As concerns the findings regarding participants of the studies, children were the most frequent subject group for both theses and articles. These findings were expected and were supported by previous studies (Ahi & Kıldan, 2013; Altun et al., 2011; Demirtaş İlhan, 2017; Özen Uyar & Ormancı, 2016). The scope of early childhood education focuses on childhood development and learning. Parents, teachers, school principals, and other individuals are subjects who have an influence on children's development and learning. Another important finding of the study concerns the sizes of samples; for most of the studies, the number of participants was between 31 and 100. The findings were consistent with the findings of previous meta-review studies (Özen Uyar & Ormancı, 2016). Demirtaş İlhan (2017) indicated that the majority of the theses sample sizes were less than 200 in the early childhood education scope. Sample size is also related to a research design. There are numbers of aspects to determine the sufficient sampling for studies such as acceptable level of significance, power of the study, expected effect size, underlying event rate in the population, standard deviation in the population (Kirby, Gebiski & Keech, 2002). Therefore, the sample size should be interpreted in the context of the research design. In addition, the findings can be related to the data collection condition in a national context. Researchers need to collect their data by their own effort and/or project budget with limited sources. There is no national educational data center. For example in the USA, the Early Childhood Longitudinal Study (ECLS) program collected data from more than 15,000 children from kindergarten to the elementary school years, which is a nationally representative longitudinal data set. The National Center for Educational Statistics (NCES) is a sponsor of the ECLS program in the USA. The data set is available for researchers to examine early learning and development in many developmental areas (Tourangeau, Nord, Lê, Sorongon, Hagedorn, Daly, & Najarian, 2015). The findings pointed out the necessity of collecting nationwide data to investigate early literacy development in the context of Turkey.

With respect to the early literacy research trends in the context of National Preschool Education Programs (PEPs), the inside-out skills have been studied more in recent years;

however, there are fewer studies in general. The increasing number of inside-out skill studies can be explained by the connection between PEP's scope and research topics. PEP (2013) has addressed more inside-out early literacy acquisitions than PEP (2006). Furthermore, inside-out skills were more investigated in articles than in theses. According to the findings of the current study, a small number of studies were involved in writing and writing awareness (Altun, Erden, & Snow, 2016; ořkun & Deniz, 2016; Őimřek, 2011; Yıldız, Atař, Aktař, Yekeler, & Donmez, 2015). There are very few studies dealing with preschool settings and home literacy environments (Altun, 2013; Altun & Tantekin Erden, 2015; Altun 2016; Turan & Akoęlu, 2014; Sarıca et al., 2014) and phonological awareness of young preschool children (Sarı & Aktan Acar, 2013; Karaman, 2006; Karaman ve stun, 2011; Turan ve Akoęlu, 2011; Turan ve Gul, 2008). Overall, the smaller number of studies related to inside-out skills can be explained by the PEP's (2013) caution about introducing letters to children.

Kargın, Guldenoęlu & Ergul (2017) indicated that Turkish preschoolers perform better developing vocabulary than phonological awareness, letter identification and listening comprehension. In their study, they argued that preschool teachers' negative beliefs about teaching some early literacy skills such as letter identification might be the one of the reasons that causes low performance of young preschoolers on phonological awareness, and letter identification skills. In another study by Ergul et al (2014), it is presented that preschool teacher believe that they do not feel confident about showing letters in preschool settings. Additionally, in PEP (2013) acquisition of some early literacy skills such as phonological awareness are not defined in details to guide preschool teachers (Kargın et al., 2017).

To sum up, reading is a basic skill for intellectual development and personal learning. In the globalizing world, the proportion of literate people is important for economic development, as well as increasing the level of social development of the country (Council of the European Union, 2012). In this context, it is necessary for countries to increase the level of reading and to actively pursue the development of this skill. There is variety of early literacy programs around the world and their primary aim is to develop early literacy skills from the start. However, the content of those early literacy programs can be adjusted based on differences in cultures, languages and beliefs about teaching to young children (Snow, 2017), In this study, our aim was to examine the research trends in the field of early literacy in the last decade in Turkey. It can be concluded that content of National PEP was updated with more early literacy skills and concurrently, this reflected on the research trends in the last decade in Turkey.

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