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The Importance of Early Childhood Education and School Starting Age in the Reading-Writing Learning Process

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This study is aimed to determine the importance of school starting age and prior early childhood education experience in the process of learning to read and write. The study was carried out with first grade students enrolled in four public schools in Bursa city center and their teachers. A descriptive model which involves analysis of subject and events within their specific conditions was used as study method. Quantitative data were collected through the Reading Skills Scale and Dictation and Writing Skills Scale developed by Obalar (2010) which were completed by the students' teachers. Qualitative data were collected by a teacher interview form which was prepared according to a review of the relevant literature and first grade acquisitions. Ten primary school teachers were interviewed. The interviews were video-taped. Independent Sampling Mann Whitney U-test was used to analyze quantitative data. Content Analysis method was used to analyze qualitative data. The findings showed that there was a significant difference between 60-71 months old students and 72 months old and older students in terms of school starting age in favor of older students; and that there was a significant variation in terms of prior early childhood education experience in favor of the students who received early childhood education. Findings support the results obtained from the teacher interviews.

1. Introduction

Children start school with some life experience. While some of them grow up in houses in which books are read every day, some grow up without encountering any books at all. Each child needs a certain level of support, first provided by the family, then by early childhood education programs to develop fundamental reading-writing skills and knowledge. In providing the support, the knowledge and sensitivity of the parents about child development and their child's needs, in other words, their eagerness

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to take responsibility for the child, is relatively important. Because the first years of life are the years when investments are made for the future of societies, the losses that occur in this period are either hard or impossible to compensate. Early childhood education plays a vital role especially in eliminating or minimizing the deficiencies resulting from socioeconomic structure of the family. In this respect, especially having or not having early childhood education experience has various impacts, from adaptation of the child to school to academic achievement and continuation of school. (Strickland & Riley-Ayers, 2006; Burger, 2010; NICHD Early Child Care Research Network, 2005b; Storch & Whitehurst, 2002; Lomas, 2005).

Early childhood programs and policies gained popularity and became widespread due to support provided by politicians and researchers around the world for academic development (Key Data on Education in Europe 2012, s.11; Duncan et al., 2007). However, the pre-schooling ratio in Turkey in the 2011-2012 academic year was 69.5% in 5 years old groups (60-72 months) and 44.04% in 4-year olds (48-60 months) (Kocabiyyik, 2013). In other words, 30% of children who started first grade in the 2012-2013 academic year started first grade without having received early childhood education or without being ready for school. McHale and Cermak (1992) reported that 30-60% of the elementary school child's class time is spent in fine motor/writing activities, with writing as the predominant task. As a result the early childhood experience and readiness activities for reading-writing have utmost importance prior to primary school. The period of adapting to school and to reading-writing expectations/requirements will be shortened for the children who had prior experience and schooling will be easier and more enjoyable for them. All of these will have a positive impact on the emotions of children towards school, teacher and classmates and their desire to learn. On the other hand, it will be quite the contrary for the children who start school without prior experience in early childhood education. Since the school will be a new environment for them in many ways, they will need more time to adapt to school and its rules. Furthermore, differences will occur in learning speed due to different experiences between the children who had experiences and who did not in terms of readiness to reading-writing. These differences will require them to put more effort into reinforcing what they learn. All of these adjustment issues will cause children with no prior early childhood education experience to get bored at school and to lose their interest, which will negatively impact their adaptation and their academic achievement in the beginning of schooling.

In addition to early childhood education experience, school age is one of the most important factors in beginning school. In most European countries, children start school at the age of six. According to data from the European Commission (Key Data on Education in Europe 2012, p.14), school age of compulsory primary education is four in Northern Ireland; five in Malta, Scotland and Wales; six in Austria, Belgium, Cyprus, Czech Republic, France, Germany, Greece, Hungary, Iceland, Republic of Ireland, Italy, Liechtenstein and Spain; seven in Bulgaria, Estonia, Denmark, Finland, Latvia, Poland, Romania and Sweden. In Turkey, according to the guidelines of Primary Education Institutions, compulsory primary school age covers children of ages 6-13 and starts at the end of September of the year the child is five years old and ends at the end of the academic year when the child becomes 14 years old (MEB, 2012, 6287/1md). Article 15 of the same guideline stipulates that children who are 66 months old by the end of September, which is the enrollment period, are enrolled in first grade of primary



schools. On the other hand, 60-66 months old children who are considered to be ready for primary school in developmental terms, and whose parents provide a written consent, are also enrolled in first grade of primary school. Furthermore, 66-month-old and older children who had the right for enrollment but who are not physically or mentally adequately developed and could not adapt to school can be directed to pre-school education or their enrollment can be delayed for one year until November upon a medical report, issued by health institutions, on physical or cognitive developmental delay. Recent amendments to this article allowed 66, 67 and 68 months old children who have the right to enroll to postpone their enrollment for 1 year upon a petition to be submitted by their parents (Amendment:RG-14/08/2013-28735).

Research has shown that for a child to grow physically, socially and emotionally healthy the environment needs to be free from stress and toxins. Researchers emphasize the importance of timing as follows: a) expecting children to acquire certain skills before they are ready causes stress for the child and damages brain development Frusciante (2009), b) age differences in a class create an unfair advantage especially for the older children in terms of the development of psychomotor and social skills (Katz, 2000).

There are certain factors that separate the child's school experience from preschool experience (cited by Sharp, 2002 from Bertram & Pascal, 2002; Sutherland, 2000). Firstly, the classroom teachers play a more didactic role than kindergarten teachers and the child spends less time in his/her choices of activities. Secondly, the students are required to sit for a prolonged period of time leaving the children with less activity to discover their environment. This could be a result of pedagogical approaches of the classroom teacher and/or deficiency of playgrounds. Thirdly, rather than a play-centered approach to develop concept, memory, verbal and social skills of children, subjects and subject-related concept knowledge are given importance (Quick et al., 2002). Lastly, the number of children per teacher ratio is higher in primary grades than the ratio in preschool giving the preschool teachers more time to individually concentrate on the needs of children.

Research Questions

This study is aimed to determine the importance of early childhood education and school starting age in the process of learning to read and write. The study attempted to answer the following questions: a- What are the performance levels of 60-71 months old students in readiness activities for reading-writing according to teacher observations? b- What is the difference between reading levels of the students in terms of school starting age, gender and early childhood education? c- What is the difference between reading skills levels of 60-71 months old students in terms of gender and early childhood education? d- What are the phonemic awareness, tone of voice and reading performances of 60-71 months old students in the process of learning to read according to the observations of the teachers? e- What is the difference between dictation and writing skills levels of the students in terms of school starting age, gender and early childhood education? f- What is the difference between dictation and writing skill levels of 60-71 months old students in terms of gender and early childhood education? g- According to teacher observations what are the levels of 60-71 months old students in writing, and syllable, word and sentence formation?



2. Method

This study was built up on a descriptive research model. The main goal of this type of research is to describe the data and characteristics about what is being studied. The idea behind this type of research is to study frequencies, averages, and other statistical calculations (Karasar, 2009).

2.1. Participants

The study group consisted of 308 first grade students enrolled in four public schools in Bursa and their teachers. The students were categorized according to age based on birthdate data (day/month/year) in their class rolls which were provided through e-school. The students who had the right to start school as per the amended article 15 of the Regulation on Primary Education Institutions were included in the 60-71 months old group; while other students were included in the 72-month-old and older age group. The Reading Skills Scale was evaluated by teachers not included in the study for reliability purposes according to classroom lists while the Dictation and Writing Skills Scale was evaluated by the researcher by having the students write a dictated text. Due to student absences, the total number of students has changed in this scale. The characteristics of the study group and interviewed teachers for both scales are presented in the following tables.

Table 1. Characteristics of Reading Skills Scale Group

Class	Male		Female		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
60-71 months old	39	48.8	41	51.2	80	26
72 months old and older	117	51.3	111	48.7	228	74
Total	156	50.6	152	49.4	308	100

The Reading Skills Scale was administered to a total of 308 students, 80 (26%) of whom were 60-71-month-old students and 228 (74%) of whom were 72-month-old and older students. Of these students, 156 (50.6%) were male, and 152 (49.4%) were female.

Table 2. Characteristics of Dictation and Writing Skills Scale Group

Class	Male		Female		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
60-71 months old	36	49.3	37	50.7	73	26.8
72-months old and older	101	50.8	98	49.2	199	73.2
Total	137	50.4	135	49.6	272	100

It is understood from Table 2 that the Dictation and Writing Skills Scale group consisted of a total of 272 students, 73 (26.8%) of whom were 60-71 months old and 199 (73.2%) of whom were 72 months old and older. Of these students, 137 (50.4%) were male, and 135 (49.6%) were female.



Table 3. Characteristics of Interviewed Teachers

Code	Gender	Seniority	1st Grade Experience	Cursive Italic Writing Experience	Class Size	Number of 60-71-month-old Students	Interview Time
T1	Female	20	7	1	29	9	20:11
T2	Male	4	3	3	28	8	09:37
T3	Male	6	1	1	27	6	12:07
T4	Female	7	1	1	27	8	15:00
T5	Female	8	1	1	41	14	07:18
T6	Female	20	4	1	40	8	08:10
T7	Female	10	1	1	41	9	10:21
T8	Male	14	3	none	26	1	06:32
T9	Male	21	1	none	28	11	13:42
T10	Male	3	None	none	27	7	09:13

It is understood from Table 3 that 5 of the interviewed teachers were female and 5 were male. They had a professional experience of 3-21 years.

2.2. Measurement

2.2.1. Reading Skills Scale: The scale was developed by Obalar (2010) to measure reading skills of students taking into account primary education first grade acquisitions in the 2005 Primary Education Program. The scale contains a total of 18 items in a five-item Likert Scale and is completed by primary school teachers for their students. High scores indicate more developed reading skills. Validity and reliability study of the scale was conducted using data collected from 141 students from four different second grades. The students were required to read the reading text prepared for the school and a different text to provide reliability of the scale; two primary school teachers excluding the teachers of the students completed the scale. Pearson's correlation coefficient between the two evaluations was calculated. The first evaluator had four classes read the same text and completed the scale for each student. On the other hand, the second evaluator had both classes read the same text with the first evaluator, while he/she had the other class read a different text and completed the scale for each student. Correlation between the two different evaluations for the same text was found to be .73; while correlation value obtained to evaluate the different texts was .83. Both correlation values were found to be significant at .001 level. Cronbach's alpha value calculated for the scale was .953 according to the data of the first evaluator and .968 according to the data of the second evaluator. Item-total values varied between .495-902. Cronbach's Alpha value was calculated as .989; item-total values varied between .835-.953.

3.2.2. Dictation and Writing Skills Scale: The scale was developed by Obalar (2010) to measure dictation and writing skills of students taking into account primary education first grade acquisitions in the 2005 Primary Education Program. The scale contains 21 items in a five-item Likert scale and is completed by primary school teachers for their students. High scores obtained from the scale indicate improved dictation and writing skills. Validity and reliability study of the scale was conducted on data collected from 141 students from four different second grades. A dictation text and dictation paper were prepared for the scale. The students were required to write the dictation text prepared for the scale to provide reliability of the study. The scale was



scored by two evaluators. Pearson's correlation value between the scores of the two evaluators was calculated as .916 and this value was found to be significant at .001 level. Calculated Cronbach's Alpha value of the scale was found to be .956 according to the data of the first evaluator and .960 according to the data of the second evaluator. Item-total values varied between .587 and .868. Cronbach's Alpha value was calculated as .981 for the study group, and item-total values varied between .722 and .903.

3.2.3. Teacher Interview Form: The form was prepared by one of the researchers based on Turkish first grade acquisitions in the Primary Education Turkish Lesson Teaching Program and Guidelines (2009) and the study of Şahin (2008) to determine the performances of students in acquisition of reading and writing skills. The questions in the form were prepared to determine skills in the process of preparation for reading and writing, reading skills and writing skills. The draft interview form was reviewed by one academician and six primary school teachers. The form was given its final version after a pilot interview with three primary school teachers.

2.3. Data Collection

Data were collected in May and June in the 2012-2013 academic year. The Reading Skills Scale and Dictation and Writing Skills Scale were completed by primary school teachers for each student. The teachers were informed about the scales and were requested to complete the forms in fifteen days. The researcher interviewed ten primary school teachers using the Teacher Interview Form. The interviews were video-taped. The interviews were made at school, outside of course hours in a place determined by the school administration.

2.4. Process of Analysis

Reliability analysis was used to analyze quantitative data; Kolmogorov-Smirnov Test was conducted to analyze normal distribution and Independent Samples Mann-Whitney U-Test was used to determine if there was a variation between the groups. The responses of the teachers to the questions in the Teacher Interview Form were analyzed by the researchers using Content Analysis method. The researchers aimed to write and analyze verbal or visual messages using this method (Cole, 1988 cited in Elo and Knigas, 2008). This analysis was conducted in several steps. Content of each interview (text), in other words, each answer to the questions was read by the researcher again and again in an attempt to entirely analyze the answer to the question. All answers were listed in sentences and words; common or similar expressions were grouped, and themes representing their groupings were formed (Elo and Knigas, 2008). Numerical frequency of the items in sub-themes of the formed themes was determined by frequency analysis technique, which is a content analysis technique that enables understanding the concentration and significance of that item (Bilgin, 2006).

3. Results

3.1. Qualitative Data Analyses for Preparatory Activities for Reading and Writing

In this section, evaluations of teachers about the performance of 60-71 months old first grade students included in the study in preparatory activities for reading and writing are distributed under themes.



Table 4. Distribution of evaluations of teachers about the performances of 60-71 months old students in preparatory activities for reading and writing

Evaluations of teachers about the performances of five years old students in preparatory activities for reading and writing	f
Developmental Characteristics	
Getting tired quickly after drawing two lines	5
Inadequate smaller muscle development	4
Experiencing difficulty due to small age	2
Getting tired very quickly	2
Inadequate physical development	1
Short stature	1
Perception problems	1
Inability to take responsibility	2
Pencil Grip and Grasp	
Majority of students experience difficulty in grasping pencil while drawing lines	5
Some of the students have never grasped a pencil before	3
Some of these children experience difficulty in grasping pencil due to pencil grip problems	3
Hand-Eye Coordination	
Inability to draw lines properly	5
Experiencing a lot of difficulty in scratching and drawing lines	3
Inability to fit the lines in necessary spaces	2
Experiencing difficulty in cursive italic writing	2
Experiencing difficulty in adjusting the size of letters	1
Inability to write neatly	1
Readiness	
Getting bored very easily from preparatory activities and wanting to play games outside	8
Asking their families to do their homework at home	4
Wanting to go home when they pack their bags at recess	3
Inability to do anything on their own and asking their mothers to complete their tasks	2
Leaving everything behind when the bell rings	1
Early Childhood Education Experience	
Having preschool experience directly affects performance	5
Experiencing a lot of difficulty due to lack of kindergarten experience	3
Those who are younger and have kindergarten experience can be at the same level with older ones as they acquire school culture	1
The students who have no kindergarten education experience difficulty in fulfilling their school-related responsibilities	1
Family Support	
Children whose families pay attention experience less difficulty	2
Children whose families do not pay attention at home experience major difficulties	2
Performing preparatory activities at home decreases difficulties	1
Comparison with Older Ones	
Children experience problems in keeping up with others	6
There is a significant difference between them and others in terms of <i>writing speed</i>	4
Adaptation	
Experiencing adaptation problems	3
Disrupting classroom order	1
The students who have been to kindergarten treated their teachers as teachers while those who have not received kindergarten education treated them as friends	1
Other Thoughts	
They experience difficulty in looking after their belongings and bringing their school materials	5
Scratching or tearing their notebooks instead of writing on them	2

Analysis of Table 4 reveals that evaluations of primary school teachers about the performances of 60-71 months old students in preparatory activities for reading and writing mainly include the following:



In terms of developmental characteristics, the teachers stated that the students got tired too quickly after drawing two lines, that their smaller muscles did not develop adequately and that they experienced difficulty due to small age. Some of the responses of the teachers included the following: *“They are unable to distinguish books and notebooks. They open their notebooks and ask what page to open”* (T7); *“There were significant differences between them and other students in using their hand muscles, painting, and drawing lines on other lines. The others had been to kindergarten; however, this one has not been to kindergarten, so we made him/her play with play dough, but still that child has deficiencies.”* (T8) *“The young ones suffered no matter how hard we tried, even in terms of eating routine. The child does not drink milk in my class because he drinks milk from a baby bottle at home. This child is now in the classroom. I asked “Child X, don’t you like drinking milk?” He said “I like it, but I cannot drink milk here; my friends will laugh at me because I drink milk from a baby bottle at home. He cannot do up his buttons after using the toilet and asks me, as if he were asking his mother, “Can you do up my buttons?” They are too young and have difficulty doing that without getting help”* (T1).

In terms of pencil grasp and grip the teachers reported that as some of the students had never grasped a pencil or paper before, they had difficulty in pencil grasp. One of the teachers (T6) in the study responded as follows: *“There are children who cannot hold scissors and have never held a pencil before among the children who received no early childhood education and directly started first grade. When we asked the parents why they had not given their children a pencil before, they said they feared that the child would stick the pencil in his/her eyes. When we asked them why they had not given their children scissors before, they said they feared that their children would cut somewhere or cut their hands. We encountered problems caused by parents.”*

In terms of hand-eye coordination the teachers reported that the students were unable to draw lines properly, that they had great difficulty in scratching and drawing activities and that they were unable to fit the lines in the necessary spaces. One of the teachers who were included in the study (T9) reported as follows: *“They had major problems in straight lines, oval lines, and curved lines as their hand muscles are not developed”*.

In terms of readiness the teachers reported that the students got bored very easily from preparatory activities and wanted to play games outside, that they asked their parents to do their homework and that they wanted to go home when they packed their bags at recess. Two of the teachers reported as follows: *“Other students completed their activities by performing properly. Later they expected to perform the next task. Meanwhile younger students left their activities undone and asked when they would go home”* (T7). *“The child perceives the school as a game, ignores the situation or is unaware of its importance. I treated him/her accordingly; we played games for one and a half or two months”* (T8).

In terms of early childhood education experience the teachers reported that attending kindergarten directly affected the performance of a student and that those who did not attend kindergarten experienced lots of problems. Responses of some of the teachers are as follows: *“Of course, they had difficulty in using their materials because someone always tidied them at home. Because they did not attend kindergarten, they are unaware that they have to tidy or remove things. They are unaware that they have to take those materials back. They just come and go”* (T1). *“However, as I have already*

said, the children who attended kindergarten are aware of that no matter how young they are. They are better than a 7.5-year-old who has not attended kindergarten” (T6). “Of course there were differences, especially those who did not attend kindergarten experienced major problems. Some students in the small age group had received kindergarten education; they were more comfortable and at an advantage” (T9). The response of one of the teachers to the following questions of the researcher is presented below “Can we say that while there was a difference between these two groups in the period of preparation for school, currently there is no difference in terms of reading and writing skills? “There is no significant difference now. There is no level difference in my class. However, they made us feel weary at the beginning of the school. The importance of kindergarten becomes prominent at this point. The students who had attended kindergarten significantly differed from the others (T10).

In terms of familial support the teachers reported that the children whose families paid attention experienced fewer problems, while those whose families did not pay attention experienced major difficulties. They reported that performing preparatory activities at home decreased the difficulties experienced by the children. One of the teachers responded as follows “While some families were indifferent, the children whose families provided support did not experience significant problems” (T9).

In terms of comparison with older students the teachers pointed out that the students had difficulty in keeping up with others and that there were significant differences between them in terms of writing speed. One of the teachers who were included in the study responded as follows: “When you compare these students with others, there is a significant difference. The older ones could perform quickly while the younger ones could not. The older ones performed the activities and wanted extra activities, so we assigned them extra ones. The younger ones said “You assigned activities to them but not to us” In this adaptation period, especially the students who had attended kindergarten got very bored. They said that they wanted to start reading as soon as possible. I have a student who attended kindergarten for two years; he/she is at an appropriate age and does not want to perform painting or line drawing activities” (T4).

Three of the teachers reported that the students experienced **adaptation problems**, while one of the teachers reported that the students disturbed classroom order. The teachers also reported that the students had difficulty in looking after their belongings and bringing their school materials, and that they scratched or tore their notebooks instead of writing on them. Two of the teachers responded as follows: “Of the students we mentioned, only one was the shortest. We observed excessive untidiness in this child inside the classroom and on his desk. If I may say, one cannot find his/her clothes or lunch box on his/her desk at first” (T3). “They did not know how to take care of those materials before they used them. They used the materials excessively and needlessly; they broke and disposed of them. In other words, everyone left their belongings behind at the end of the classes. Especially those young students left their materials” (T4).

4.2. Analysis of Quantitative and Qualitative Data for Reading Skills

Analyses of mean score of the students from the Reading Skills Scale and analyses of the findings on the responses of teachers to the questions about development of reading skills of 60-71 months old and 72 months old and older first grade students are presented in this section.



Table 5. Reading Skills Scale Mann Whitney U-Test Results

Reading Skills Scale	Variables	n	Rank Mean	Rank Sum	U	p
Age	60-71 months old	80	123,43	9874,50	6634,500	.000*
	72 months old and older	228	165,40	37711,50		
Gender	Female	152	158,62	24110,00	11230,000	.420
	Male	156	150,49	23476,00		
Early childhood education	Received	158	173,02	27337,50	8923,500	.000*
	Did not receive	150	134,99	20248,50		

p<.05

Kolmogorov-Smirnov Test was conducted to determine whether the data were normally distributed to test if the scores of the participants from the Reading Skills Scale significantly varied according to age group, gender and receiving or not receiving early childhood education. *Test results showed that data were not normally distributed.* When mean scores do not fit normal distribution, U-test is used instead of t-test (Büyüköztürk, 2007). Therefore, Independent Samples Mann-Whitney U-Test was conducted to determine whether mean scores of the participants from the scale significantly varied. Analysis of Table 5 reveals that mean scores of the participants from the Reading Skills Scale did not significantly vary according to the gender variable; however *there was a significant variation according to the variables of age group and receiving early childhood education.*

Table 6. Mann Whitney U-Test Results of Reading Skills Scale Scores of 60-71 Months Old Students

Reading Skills Scale	Variables	n	Rank Mean	Rank Some	U	p
Gender	Female	41	39,24	1609,00	748,000	.619
	Male	39	41,82	1631,00		
Early childhood education	Received	13	39,15	509,00	418,000	.819
	Did not receive	67	40,76	2731,00		

p<.05

Researchers tested whether mean scores of 60-71 months old students from the Reading Skills Scale significantly varied according to gender and receiving early childhood education. Kolmogorov-Smirnov Test was used to determine whether the data were normally distributed. Test results showed that data were normally distributed. Therefore, Independent Samples Mann-Whitney U-Test was used to determine whether there was a significant difference between mean scores of participants from the scale. It is understood from Table 6 that mean scores of 60-71 months old students from the Reading Skills Scale did not show a significant variation according to gender and receiving early childhood education.

Table 7. Views of the teachers about the performance of 60-71 months-old students at the stage of phonemic awareness in the reading skills learning process

Performance of 60-71 months old students at the stage of phonemic awareness in the reading skills learning process	f
Perceiving phonemes	
Having difficulty especially in phonemes of the first letter group	4
Having major difficulties in perception of phonemes	3
Having difficulty in perceiving phonemes	2
Having difficulty in distinguishing phonemes as the number of letters increases	3
Being very unsuccessful at the beginning	2
Having difficulty in producing phonemes of the consonants in the first group (L and T)	1
Age difference	
Perceiving phonemes in a longer time than others	7
Falling behind the level of the class	4
Older students achieve better than younger ones	1
Concept development	
Low concept development	2
Having difficulty even with the most common words (book, pencil, Ela)	2
Having difficulty in understanding what is told	2
Other	
Overcoming difficulties with the support of families	1
Teachers send some students to kindergarten thinking that they cannot succeed	1

Analysis of Table 7 indicates that 60-71 months old students had major difficulties especially in producing phonemes at the beginning, comprehension of phonemes, and distinguishing and understanding phonemes. It was found that these students needed more time than their older classmates to overcome these difficulties; however they fell behind their friends in this period. In addition, two of the primary school teachers reported that these children had low levels of concept development. The views of one teacher are presented below: *“They have a low level of concept development. For example, regarding phoneme “a”, I asked what cannot fly in the air. The child said “balloon” and “plane”. He could not understand the words “cannot fly”. When I asked which one we can eat, he/she said “motorcycle”. He/she has serious difficulty in comprehension. This is also the case for perceiving phonemes”* (T4). Furthermore, while one of the teachers reported that these difficulties are overcome with the support of the family, another teacher reported that he/she sent the students who had these difficulties to kindergarten.

Table 8. Views of the teachers about the performance of 61-70 months old students in using tone of voice in the reading skills learning process

Performances in using tone of voice	f
Very low tone of voice	7
Low voice due to lack of confidence	4
Normal tone of voice	1

The majority of teachers who participated in the study reported that 60-71 months old students *had a low tone of voice*. In addition, some of the teachers reported that the children in this age group had a low tone of voice due to lack of confidence. The views of one teacher (T4) are as follows: *“They sounded as if their voice came from deep inside. They could not use their voice much because they were shy. The older ones were able to express themselves better. However, the young ones did not speak much, feeling anxious or unsure that what they say is right or wrong or fearing the reaction of the*

teacher and their classmates. Even when they answered, they answered in a very low tone”.

Table 9. Views of the teachers about reading performance of 60-71 months old students

Reading performance of 60-71 months old students	f
There are students who repeat and skip words during reading	5
There are no students who skip words while reading	2
They cannot produce some phonemes	1
They make no stress or intonation during reading	1
They read wrongly as they read based on memorization (They read “Talat” when they see “Ta”)	1
The students who fall behind do not properly produce all phonemes	1
They read wrongly as they are unable to construct a phoneme-letter relationship	1
They have difficulty in understanding what they read	1
They do not properly articulate words while reading due to anxiety during reading	1

Half of the teachers who participated in the study reported that 60-71 months old students repeated or skipped some words during reading. Two of the teachers reported as follows: “Some of the young students used memorization at first. For example he/she learnt the word “Talat” and every time he/she saw “ta” he/she used to read it as “Talat”. He/she disregarded other letters. In other words he/she could not make sense; he/she used to read based on memorization” (T2). “The most significant difference between the two groups is producing phonemes. Four of my students use different phonemes while speaking and reading-writing. Normally the child can produce the phoneme “ç”, however he/she articulates “ç” as “ş” during speaking. So, he/she writes “ş” instead of “ç”. Young children have language deficiencies. There are inconsistencies between speaking and reading” (T4).

Analysis of the responses of the teachers to the question of “**How many students cannot read in your class?**” revealed that 11 students could not read. Of these students, 8 were in the 60-71 months old age group, two were in the older age group and one had repeated the same grade. The teachers reported that the students in the young age group could not read due to the following reasons: “I believe that the child is not physically developed. It is easily understood when you enter the classroom. I am sure he/she would not have experienced so much difficulty if he/she had started first grade one year later” (T5). “The older student has already repeated the same grade. One of the young students does not know the letters; the other one knows the letters but cannot combine them” (T7). On the other hand, the teachers who reported that all the students in the class could read stated as follows: “All the students can read; however, some of them had a great deal of difficulty. I gave those students one-to-one education, I visited their houses, they visited my house, and I paid them special attention”.

The responses of the teachers to the question “**Is there a difference between age groups in terms of reading quality?**” were grouped in two categories: a) *Difference in terms of reading speed* b) *Inability to understand what they read*. The views of the teachers are as follows: “There is a difference. Older students are better, they are fast learners. I organize a reading contest although I am not sure if it is appropriate. Some of the students can read and understand 75-80 words. In the small age group, some of them read 60-65 words; however, they do not exactly understand what they need to do. In other words, they understand it when I tell them a story; however, they cannot understand it when they read. I think it takes a lot of time.” (T1). “While older students can read approximately 60 words, younger ones read 30-40 words. There is a difference in terms of quality and they are slow to understand what they read.” (T4).



“Generally all students have difficulty with long words. There are very long texts, especially in the Turkish course book. When I read them, I am bored too” (T10). Only one teacher reported that there was no difference between reading skills in terms of age groups.

The teachers were asked the question “*Is there a problem in reading manuscript writing?*” Only one of the teachers stated that he/she had problems while other teachers stated that they experienced no problems. The teacher who reported that he/she had problems explained the reasons as follows: “*One of the most important problems caused by the system, for the class in general, not only for the young students, is that we completed the 29 letters in the alphabet, which we encountered with manuscript writing. The children confused the phonemes. However, by starting to give them books, we especially overcome this problem with home activities for younger children. This is especially important for first grade students. The biggest problem is that the system we use in all our activities, including writing our names, and the system in course books are completely independent*” (T3). On the other hand, the teachers who reported that they experienced no problems stated that they taught cursive italic and manuscript writing simultaneously from the beginning of the reading-writing teaching process. One of the teachers who agreed with the opinions responded to the question as follows: “*No, they can do that. They are familiar now. After passing to sentences, while forming small texts, we taught cursive and manuscript writing versions of the same text twice a week. The children are familiar with them now. They do not have much problem with the books with manuscript letters. They had difficulty at first; however, they overcame this difficulty quickly. They did not tire us a lot; nobody had difficulty* (T1).

4.3. Analysis of Quantitative and Qualitative Data for Dictation and Writing Skills

In this section, mean scores of the students from the Dictation and Writing Skills Scale are analyzed and the findings on the analysis of the responses of the teachers to the questions on the development of dictation and writing skills of 60-71 months old and 71 months old and older 1st grade students are presented.

Table 10. Dictation and Writing Skills Scale Mann Whitney U-Test Results

Dictation and Writing Skills Scale	Variables	N	Rank Mean	Rank Sum	U	p
Age	60-71 months old	73	79,89	5832,00	3131,000	.000*
	72 months old and older	199	157,27	31296,00		
Gender	Female	135	137,84	18608,00	9067,000	.781
	Male	137	135,18	18520,00		
Early Childhood Education	Received	145	161,06	23353,50	5646,500	.000*
	Did not receive	127	108,46	13774,50		

p<.05



We tested whether mean scores of the participants from the Dictation and Writing Skills Scale significantly varied according to age group, gender and receiving early childhood education. Kolmogorov-Smirnov Test was used to determine whether the data were normally distributed. *Test results showed that data were not normally distributed.* Therefore, Independent Samples Mann-Whitney U-Test was conducted to test whether there was a significant variation between the mean scores of the participants. The results of the analysis are presented in Table 11. It is understood from the table that mean scores of the participants from the Dictation and Writing Skills Scale did not show a significant variation according to the gender variable. *However, there was a significant variation according to the age group and receiving early childhood education variables.*

Table 11. Dictation and Writing Skills Scale Scores Mann Whitney U-Test Results of 60-71 Months Old Students

Dictation and Writing Skills Scale	Variables	n	Rank Mean	Rank Sum	U	p
Gender	Female	37	35,66	1319,50	616,50	.585
	Male	36	38,38	1381,50		
Early childhood education	Received	11	42,68	469,50	278,50	.335
	Did not receive	62	35,99	2231,50		

p<.05

Researchers analyzed whether there was a significant variation between the Dictation and Writing Skills Scale mean scores of 60-71 months old students according to gender and receiving early childhood education. Kolmogorov- Smirnov Test was conducted to determine whether the data were normally distributed. *Test results showed that data were not normally distributed.* Therefore, Independent Samples Mann-Whitney U-Test was used to determine whether there was a significant difference between the mean scores of the participants from the scale. It was found that mean scores of 60-71 months old students from the Dictation and Writing Skills Scale did not show a significant variation according to gender and receiving early childhood education (Table 12).

Table 12. Views of the teachers about writing performances of 60-71 months-old students

Writing performance of 60-71-month-old students	f
Ability to write on the lines	
Having problems in writing on the line	4
Cursive writing ability	
Cursive writing inability	6
Writing either too vertical or too cursive	1
Ability to write the letters correctly	
Inability to write the letters properly	3
Inability to write some letters	2
Inability to exactly understand writing direction of letters	2
Having difficulty in writing the letters “k” and “p”	1
Ability to write the letters proportionally	
Inability to write the letters proportionally	2
Ability to write the words thoroughly	
Skipping letters while writing	4

Inability to write long words	2
Forgetting vowels	2
Inability to write some words	2
Ability to write with appropriate spacing between words and sentences	
Inability to write with appropriate spacing between the words	3
Inability to use punctuation appropriately	2

Regarding writing performances of 60-71 months old first grade students, the teachers who participated in the study mostly reported that the students could not write in cursive, they had problems in writing on the line, they skipped some words while writing, they could not write letters properly and could not write with appropriate spacing between the words. The views of the teachers who reported that they experienced problems with writing performance of the children in this age group were as follows: *“They write either too large or too small. The students who attended kindergarten did not have this problem much; however, those who did not attend kindergarten performed very badly. The child cannot manage the notebook”* (T6). *“It was very difficult to teach them writing. They said they could not write without making any further effort. However, when they go home, they write with the support of their families. This group tends to learn with the help of parents; they learn better in individual teaching than in group teaching”* (T7). *“The others write and understand very quickly. For example, we taught them proper nouns, full stop, question mark and apostrophe and they write almost without any mistakes. However the young ones constantly forget these, and we always remind them of the rules. There are students with 1.5-2 years’ age difference. So, it makes a difference, I do not know.”* (T1). Only one of the teachers who participated in the study (T3) reported that he/she experienced no problems. He/she stated as follows: *“There is no problem. I personally think that in first grade it is more important to make the children feel that they belong to school than to make them write.”*

Table 13. The views of the teachers about the performance of 60-71 months old students at the stage of constructing syllables, words and sentences in the reading and writing learning process

Performance of 60-71 months old students in constructing syllables, words and sentences	f
Inability to construct syllables and words	4
Having difficulty in construction of syllables and words as they cannot perceive phonemes	4
Having difficulty with syllables as they have difficulty with words	3
Having difficulty especially with writing	2
Having great difficulty in forming new words	2
Focusing on putting the letters side by side by articulating them rather than on the meaning of the word	2
Having a great deal of difference with other students	2
Lack of adequate familial support	2
Having no problem	1
Having difficulty in writing letters	1
Forming simpler words than those formed by older students	1
Having so much difficulty that the parents want their children to quit school	1

Regarding the performance of 60-71 months old students in forming syllables, words and sentences, *only one* of the teachers reported that the students experienced no problem. However, other teachers had great difficulties, causing these students to fall further behind their classmates, and stated that the families did not provide adequate support and that they wanted their children to quit school due to this difficulty. The



views of one of the teachers on formation of syllables, words and sentences are as follows: (T4). *“They could not do it; we could not keep up with other students”*. On the other hand, another teacher (T7) stated as follows: *“They had great difficulty in word formation, and they only focused on reading. Maybe, since we and the parents concentrated on reading, the students focused on putting letters side by side instead of focusing on the meanings of the words”*.

5. Discussion

The present study aimed to determine the importance of early childhood education and school starting age in the process of learning to read and write. According to the findings of the study: a- mean reading, writing and dictation skills levels of the children who received early childhood education significantly varied from those of children who did not receive early childhood education; b- mean reading, writing and dictation skills levels of 72 month-old and older children significantly varied from those of 60-71 months old children. The evaluations of the teachers who participated in the study based on their observations confirmed our findings and statistical analyses.

According to the observations of the teachers, 60-71 months old students experienced various difficulties in the learning process in preparatory activities for reading-writing in terms of developmental characteristics, pencil grasping and grip, hand-eye coordination and readiness. The Toronto Region School Committee Report (2000; 69-70) states that there are three stages in developing writing skills of students: emergent writing, early writing and developing fluency. The emergent writing stage evolves during the pre-school period and the first semester of first grade; early writing evolves in the second semester of first grade and the first semester of the second grade (cited by A Guide to Effective Instruction in Writing, 2005). In the development of these stages, providing the child with timely and appropriate support, and accurate identification of ability and interest towards writing are of great importance. The fact that the students who were included in the study felt tired in a short time and had inadequate hand-eye coordination prevented the students to show the expected performance in preparatory activities for writing. Duran and Akyol (2010) carried out cursive italic writing preparatory activities with kindergarten students for a period of 16 weeks. The researchers found that the handwriting of these students significantly varied from that of the students who did not receive preparatory education for first grade in terms of the “sitting, holding paper, writing direction, connection, speed, appropriate punctuation and legibility” criteria. These results indicate the importance of early childhood education in terms of preparation for reading-writing and shows that the content of early childhood education practices should take into account the aims and acquisitions of the first grade program. In other words, our results reveal the importance of reflecting the changes in the primary education program in early childhood education programs. Previous research has drawn attention to eagerness for writing and shown that the children who were taught writing before they were ready were discouraged and developed writing habits which were hard to correct (cited by Calp, 2013 from Amundson, 2001). Furthermore, the view presented by Graham et al., (1997) that developing fluency in handwriting increased with age, also supports this approach. In this respect, the fact that individual efforts of teachers are not adequate to overcome the difficulties for some of the students indicates that readiness levels of the children in this age group are rather low. As the teachers who participated in the study reported, children in the same age range and at similar readiness levels can be gathered in a class,



thus allowing them to perform preparatory activities for reading-writing for a longer period. As stated in the literature, negative effects of the difference between the children with a higher readiness level and others on the learning process can be alleviated. In addition, pencil grippers that make pencil grasp easier can be used to support pencil grasp and hand-eye coordination (Arslan, 2012). Hall, Toland, Grisham-Brown and Graham (2013) reported that psychomotor skills and visual perceptions of letters can be supported by interactive writing. The researchers reported that teachers can enable the students to play an effective role by providing them with varying levels of support; strategies can be developed according to age, needs and ability levels of each child and thus the children can speak while writing or dictating about letters, phonemes and words. The number of students per teacher should be considered as an important factor in providing such support.

The students in the study and the parents in the study group learned reading and writing with different methods. There are fundamental differences between sentence or part-whole-part method and Phoneme Based Sentence Method. In the former method, following preparatory activities, they start with simple sentences related with the daily life of the child (Nas, 2005). However, in the current method, the process involves approaching the sentence and text starting from phonemes. Therefore, like some of the teachers in the present study, we believe that providing parents with training reflecting practice of the method and with informative and practical examples will directly affect the quality of parental support.

The fact that the teachers who participated in the study reported that attending kindergarten directly affected the performance of students while those who did not receive preschool education experienced difficulties shows the importance of early childhood education in terms of preparation for reading-writing, adaptation to school and fulfillment of school responsibilities. Considering that early childhood education is still paid education in Turkey, it is vital to give priority to and make available alternative early childhood programs similar to the Mother-Child education Program, especially for the children whose development is under risk due to socio-economic reasons (Bekman & Atmaca Koçak, 2011). Research has shown that the process from birth to the age of five is a determinant of future reading success. The skills and abilities which are the determinants of this process are verbal language (understanding what is told, verbal language vocabulary), alphabet code (alphabet knowledge), phonetic awareness (ability to distinguish the phonemes of words), distinguishing syllables of words, and print knowledge and concepts (Strickland & Riley-Ayers, 2006).

In addition to early childhood education, age of starting school and age of learning to read are reported to be important factors affecting future reading success (Robertson, 2010; Suggate, Schaughencyb & Reese, 2013). Unfortunately, the evaluations of primary school teachers who participated in the study revealed that the children in this group experienced difficulties in many aspects during the process especially in preparation for reading-writing. The teachers perceived familial support, cooperation with the family and visits made by the teachers. However, when it comes to entering a new environment, adaptation to that environment, making friends and learning to read and write, starting a child in first grade without any previous evaluation in terms of these factors will be quite unjust for the children in this age group. 60 months old children who start school upon the will of parents who are unaware of the readiness level of their children are the greatest sufferers of this unjustness. Of course this will not



be the case for all 60 months old children in Turkey. However, leaving the success or failure of school experience of a child to chance is an unacceptable approach. Some evaluations can be made to determine whether developmental characteristics of especially 60 months old children who will start school upon the will of their parents without early childhood education are appropriate to take school responsibility. For example, school competence of children in terms of language, physical, social, emotional and cognitive skills can be determined by the Kiel School Admission Test which was adapted into Turkish by Kutluca Canbulat and Canbulat (2012). Potential difficulties the child can encounter at school can be eliminated; by providing appropriate guidance, the child can be sent to early childhood education institutions or special education institutions thus enabling the child to start school the next year with enough school readiness. This will prevent the child developing negative emotions towards school and will enable the child to start school the next year with developed academic skills. In addition, this will allow the family to provide the child with early appropriate support. This will be for the good of the child and family in the short term, and for the good of society and the future of society in the long term.

The reading skills levels of 60-71 months old children who were included in the study showed significant variations in terms of gender and receiving early childhood education. In this case, it can be said that phonological awareness in children with early childhood experiences is not sufficiently supported. However, in the development of reading skills, phonological awareness is one of the most important determinants (Anthony & Francis, 2005). In addition, verbal expression skills play a vital role in development of reading skills in terms of text comprehension as much as early childhood education does (Storch & Whitehurst, 2002). In this respect, it can be stated that verbal expression skills of the study group were not adequately developed when they started school. Before early childhood education, communication between the parents and the child and the characteristics of the environment offered to the child to develop reading skills are effective for the development of these skills. Saracho (2007) reported that parents should help children so that they can understand the world and that play is the most effective way to achieve this. Sheridan and Knoche (2008) reported that parents can provide direct or indirect learning environments for their children both at home and outside, which is sometimes termed as “home curriculum”. Weigel, Martin and Bennett (2006) found that there was a positive relationship between parent-child reading-writing activities and the child’s interest in reading and between the beliefs of parents towards reading and parent-child language activities. Sénéchal and LeFevre (2002) found that there was a significant relationship between reading books to children by parents and vocabulary, listening comprehension skills and the reading habit.

It is believed that the most important factor in difficulties of 60-71 months old students in comprehension and distinguishing phonemes and in their falling behind the class in general is that a great majority of the group did not receive early childhood education (Erdoğan, 2011). As the teachers reported, it can be stated that the fact that the students spoke in a very low tone can result from their opinion that they could not read as well as their older classmates. Repetitive reading can be explained by the intervention of phonetic awareness levels in reading skills.

According to the responses of the teachers, 11 students in the study group had not learned how to read by the time they finished first grade. The fact that 8 of these students were in the young age group indicates that the children in this age group should be supported in terms of school readiness. The fact that a great majority of the students



had no difficulty in reading manuscript letters should be considered as the success of the teachers who participated in the study. This indicates that the teachers taught and made the students read cursive writing and manuscript writing during the reading-writing teaching process. Considering that all course books included in the first semester of first grade, excluding “First Reading, I am Learning to Write”, are written in manuscript letters, this has vital importance in terms of facilitating the transition of the students from cursive italic writing to manuscript writing.

It was found that dictation and writing skills levels of first grade students who were included in the study significantly varied according to the age group and receiving early childhood education variables. This result indicates the importance of both early childhood education and readiness in development of dictation and writing skills. On the other hand, there was no significant difference between dictation and writing skills levels of 60-71-month-old students in terms of gender and receiving early childhood education. However, rank mean values showed that dictation and writing skills levels of the students who received early childhood education (42.68) were higher than those who did not receive early childhood education (35.99). It is believed that there was no difference between the groups due to number of participants. This result shows that early childhood education directly affects the skills of the students especially in terms of preparation for writing. Erdoğan (2011) carried out a study to determine the relationship between phonological awareness skills that develop in the pre-school period and writing skills in primary school first grade and found that phonological awareness skills the children had before they learned to read and write allowed them to recognize and distinguish phonemes and to be sensitive to phonemes; and that the students with high phonological awareness were able to write words and sentences formed with the letters they know more accurately than the students with low phonological awareness. Considering reading-writing teaching using the Phoneme Based Sentence Method, this finding confirms that developing phonetic awareness should be given more importance in early childhood education.

According to the statements of the teachers who participated in the study, younger students were slower than older students in writing. Low writing speed had a negative impact on learning speed. While one group learned fast and got ready for the next stage, the other group needed more time. This finding also shows the importance of readiness.

The fact that young students were unable to write in italics, had difficulty in writing on the lines, were unable to write the letters properly and could not write with appropriate spacing between the words indicates their needs in terms of preparation for writing skills. Furthermore, skipping letters while writing shows that they are unable to form or distinguish phoneme-letter relationship. This can be considered as a difficulty caused by starting reading-writing teaching based on phonemes. Especially articulation of consonants as two phonemes can cause the child to skip letters while writing.

The teachers reported that the problems experienced by young students at the stage of perceiving phonemes increased at the stage of forming syllables, words and sentences, that they read based on memorization, and that they only vocalized yet could not make sense of what they read. This increased the gap between the students in the young age group and older age group. Negative emotions experienced at the beginning of learning



experiences will decrease eagerness of the learner and will negatively affect their emotions towards school.

6. Result and Suggestions

Teaching reading-writing is the fundamental responsibility of teachers and schools. However, teaching reading-writing is a complicated professional competence which requires a high level of expertise. When children start school with various levels of verbal language competence, they generally have very limited knowledge on how to read and write. Therefore, the aim of early childhood education and primary school is to help children establish a connection between written language and spoken language (Teaching Reading, 2005). As indicated in the literature and previous research, early childhood education is a determinant in establishing this connection (Burger, 2010; Bennett, Weigel & Martin, 2002). This process is important as the foundations for reading-writing are laid and developed in this period (Frusciante, 2008). Carol (2010) suggested that reading is the most valuable possession of an individual and that failure of the child in reading stems from growing up in an environment without books and lacking in appropriate educational support in critical periods. The researcher also reported that learning, especially learning to read, is encouraged by social relations. Parents, caregivers and teachers play an important role in the development of reading skills of a child. Income level, educational level of the mother, the value the family gives to learning, reading the child books before sleep, having books at home or having books borrowed from the library and high-quality early childhood education are the pioneers for the reading skills of a child. On the other hand, physical development and school starting age are determinants of writing skills. Writing will turn into a disliked activity in a short time for the children who lack writing readiness in physical, cognitive and social-emotional aspects. In fact, individuals will need this skill to express themselves throughout their lives.

The results of this study show the importance of age and early childhood education in the reading-writing learning process. The study also shows the importance of family-child interaction and reading-writing environment offered to the child at home especially for preparation for reading-writing. In fact, transition to the 4+4+4 system should have also required early childhood education to be compulsory. In Turkey early childhood schooling has not reached 100% level and this education is provided in the form of paid education. This further increases the importance of family support for the children who will start first grade without receiving early childhood education. We believe that parent schools or family education programs should include programs on how to support reading-writing skills of children inside and outside the home and that parents should be supported in raising their children independently. This was mentioned by the teachers who were included in the study regarding 60-71-month-old students. Social-emotional development at a level separate from the family, building interaction and sharing with other children, concentration, ability to follow instructions and taking part in group activities also play an important role in school achievement as much as cognitive development does (cited by Halle et al., from 2012 Thompson & Lagattuta, 2006; Hamori, 2007). As Bush (2005) stated “When children learn to like reading books, they will like to learn as well” (cited by Spellings, 2005).

References

- (2005). A guide to effective instruction in writing kindergarten to grade 3, ontario education. Retrieved from http://eworkshop.on.ca/edu/resources/guides/Guide_Writing_%20K_3.pdf 18.7.2013
-(2005). *Teaching reading report and recommendations*. National Inquiry into the Teaching of Literacy. Retrieved from www.dest.gov.au/schools/literacyinquiry. 25.7.2013
- Anthony, J. L. & Francis, D. J. (2005). Development of phonological awareness. *Current Directions in Psychological Science*, 14 (5), 255-259.
- Arslan, D. (2012). Examining first grade teachers' handwriting instruction. *Educational Sciences: Theory & Practice*, 12(4), 2829-2846.
- Bekman, S. & Atmaca Koçak, A. (2011). Mothers reporting I: For whom and why is the Mother-Child Education Program effective? *Education and Science*, 36(160), 171-183.
- Bilgin, N. (2006). Content analysis in social sciences: Techniques and examples of studies (2nd Edition). Ankara: Siyasal Kitabevi.
- Burger, K. (2010). How does early childhood care and education affect cognitive development. *Early Childhood Research Quarterly*, 25(2), 140-165.
- Calp, M. (2013). The instruction of italic handwriting to a student who has difficulty in writing (An action research). *e-international Journal of Educational Research*, 4(1), 1-28.
- Duncan, G.J., Dowsett, C.J., Claessens, A., Magnuson, K., Huston, A.C., Klebanov, P., Pagani, L.S., Feinstein, L., Engel, M., Brooks-Gunn, J., Sexton, H., Duckworth, K., Japel C. (2008). School readiness and later achievement. *Developmental Psychology*, 43(6), 1428-1446.
- Duran, E. & Akyol, H. (2010). Examination of the different variables of studies on teaching hand writing.. *Türk Eğitim Bilimleri Dergisi*, 8(4), 817-838.
- Erdoğan, Ö. (2011). Relationship between the phonological awareness skills and writing skills of the first year students at primary school. *Educational Sciences: Theory & Practice*, 11(3), 1499-1510.
- Frusciante, A.K. (2009). Early literacy and your community: Helping young children with language and reading. February 2009, Adapted from Early Literacy Framing, November 12, 2008. Prepared by Angela K., PhD. Refer to the expanded report for citations and results from actual literature. William Caspar Graustein Memorial Fund, Hamden, Connecticut.
- Hall, A.H., Toland, M.D., Grisham-Brown, J., & Graham, S. (2013) Exploring interactive writing as an effective practice for increasing Head Start students' alphabet knowledge skills. *Early Childhood Education Journal*, 41(3), 1-8.
- Halle, T.G., Hair, E.C., Wandner, L.D. & Chien, N.C. (2012). Profiles of school readiness among four-year-old Head Start children. *Early Childhood Research Quarterly*, 27, 613-626.
- Hamori, S. (2007). The effect of school starting age on academic performance in Hungary.(Unpublished PhD Thesis). Institute of Economics Hungarian Academy of Sciences Department of Human Resources, Corvinus University of Budapest. Retrieved from <http://www.econ.core.hu/doc/bwp/bwp/bwp0702.pdf>
- Karasar, N. (1998). Scientific Research Method. Nobel Yayın Dağıtım: Ankara.



- Katz, L.G. (2000). *Academic redshirting and young children* (Eric Digest EDOPS-00-13). Retrieved from <http://npin.org/library/2001/n00520.n00520.html>
- Kocabıyık, F. (2015, Aptıl). Schooling rates in preschool education. Retrieved from <http://www.egitimtercihi.com/okuloncesi/9396-okul-oncesinde-okullasma-oranlari.html>
- Kutluca Canbulat, A.N.& Canbulat, M. (2012). The school admission tests in Germany and the adaptation of the Kiel School Admission Test. *Elementary Education Online*, 11(1), 1-17.
- Lomas, K. (2005). Children's reading achievement: The importance of oral language and narrative skills. Lehigh University's Lehigh Student Award Winners Digital Library.
- McHale, K., & Cermak, S. (1992). Fine motor activities in elementary school: Preliminary findings and provisional implications for children with fine motor problems. *American Journal of Occupational Therapy*, 46, 898–903.
- Nas, R. (2005). Accelerated teaching of reading and writing. *Öğretmen Dünyası*, 304, 13-17.
- NICHD Early Child Care Research Network (2005b). Pathways to reading: The role of oral language in the transition to reading. *Developmental Psychology*, 41, 428-442.
- Robertson, E. (2011). The effects of quarter of birth on academic outcomes at the elementary school level. *Economics of Education Review*, 30(2), 300-311.
- Saracho, O. N. (2007). Hispanic families as facilitators of their children's literacy development. *Journal of Hispanic Higher Education*, 6(2), 103–117.
- Sénéchal, M. & LeFevre, J. (2002). Parental involvement in the development of children's reading skill: A five-year longitudinal study. *Child Development*, 73, 445–460.
- Sharp, C. (2002). School starting age: European policy and recent research. Paper presented at the LGA Seminar 'When Should Our Children Start School?', LGA Conference Centre, Smith Square, London, 1 November 2002. National Foundation for Educational Research. Retrieved from <http://www.nfer.ac.uk/about-nfer/>
- Sheridan, S.M. & Knoche, L.L. (2008). Parental engagement and school readiness parent-child relationships in early learning. Nebraska Center for Research on Children, Youth, Families and Schools. Retrieved from <http://cyfs.unl.edu/docs/Publications&Presentations/Parental%20Engagement%20and%20School%20Readiness.pdf>
- Spellings, M. (2005). Helping your child become a reader. U.S. Department of Education Office of Communications and Outreach. Retrieved from <http://www2.ed.gov/parents/academic/help/reader/reader.pdf>
- Storch, S. A., & Whitehurst, G. J. (2002). Oral language and code-related precursors to reading: Evidence from a longitudinal structural model. *Developmental Psychology*, 38, 934–947.
- Strickland, D. & Riley-Ayers, S. (2006). Early Literacy: Policy and Practice in the Preschool. Years. April 2006, Issue 10, Preschool Policy Brief National Institute for Early Education Research Retrieved from <http://nieer.org/resources/policybriefs/10.pdf>
- Suggate, S.P., Schaughencyb, E.A. & Reese, E. (2013). Children learning to read later catch up to children reading earlier. *Early Childhood Research Quarterly*, 28, 33-48.

- Şahin, A. (2012). Problems with the teaching of cursive handwriting. *Education and Science, 37*(165), 168-179.
- Weigel, D. J., Martin, S. S., & Bennett, K. K. (2006). Mothers' literacy beliefs: Connections with the home literacy environment and pre-school children's literacy development. *Journal of Early Childhood Literacy, 6*(2), 191-211.

