

Full Length Research Paper

A study on preschool children's name writing and writing readiness skills

Özlem Şimşek Çetin

Kırıkkale University, Education of Faculty, Kırıkkale, Turkey.

Received 01 January, 2015; Accepted 10 February, 2015

The purpose of this work is to analyze the name writing and writing readiness levels of preschoolers in terms of various variables and to identify the relationship between children's name writing skill and writing readiness levels. To that end, name-writing and writing-readiness skills of 204 preschoolers at the ages of 3, 4 and 5 were examined using observation forms. Results revealed that children's name writing skills were similar in terms of school type and gender yet they differed based on their age. Writing readiness scores showed no significant difference in relation to children's gender but significant differences were observed in school type and age. Writing readiness levels were higher among children who were able to write their full names and lower among those who just scribbled randomly.

Key words: Preschool children, nursery, kindergarten, emergent literacy, name writing, writing readiness.

INTRODUCTION

In literate communities young children often come into contact with various written texts. They see various written language on television programs, in story books and in the newspapers. As a result, many children naturally have an idea about written symbols (Ho, 2011). Children's reading and writing development begins before they begin to learn formal reading and writing, which is explained by the concept of emergent literacy. Developmental literacy includes children's knowledge, skills and attitudes in relation to reading and writing before they begin formal reading-writing instruction (Puranik and Lonigan, 2012). It is crucial in terms of emergent literacy that children encounter materials such as paper, pencil and book. Preschoolers actively explore the link between oral and written language within a rich

literacy environment. Children of preschool age therefore are an active constructivist of literacy (Brenneman et al., 1996).

Preschool children acquire writing skill through real life experiences (Morrow, 2007). During this age, children's behaviors of making scribbles and signs are not random, non-relevant literacy drawings but an indispensable part of the literacy development (Lopez, 2011). Writing is a developmental process. Writing skills in preschool children can be observed in several ways such as recording ideas for someone else or for oneself, performing physical movement of handwriting or imitating this behavior, forming letters or letter-like shapes, copying words or letters and writing words. Communication is the goal of writing. Children comprehend the goal of

E-mail: ozlemgazi@gmail.com

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writing by being supported by the adults whom they see writing (Ranweiller, 2004). For preschool children, drawing, scribbling and mark making are believed to be a way of communication and self-expression. All these symbolic representations play a central role in literacy development of children. It is thought that development of writing and drawing is indispensable (Yang and Noel, 2006). Most children, usually before they are 3,5 - 4 years old, use similar marks to write and draw pictures and cannot distinguish the difference between them (Treiman and Yin, 2011). Mark making and scribbling are observed starting from infancy and toddlerhood (Dunst and Gorman, 2009). At about 1 - 2, 5 years old, children make random scribbles. Random scribbling is followed by controlled scribbling. During controlled scribbling, children say that they are drawing or writing. Children later begin to identify the objects they draw by a name (for instance, the child says s/he has drawn a flower). It is a milestone in terms of abstract thinking that children begin to put a name to their marks because this is an indication for children that real objects can be symbolized through marks. Around 2,5 - 3 years old, children begin to distinguish between drawing and writing (Baghban, 2007). At four, they are more skilled and learn that print is written from left to right along a line. When children are asked to draw a picture during this age, they use any part of the paper but when asked to write they tend to write from left to right along a line (Love et al., 2007). Brenneman et al. (1996) found a difference between writing and drawing among the preschoolers who had a mean age of 64.4 months and were not taught how to write before. These children mostly preferred to use crayons while drawing and used a larger area on the paper. However, when writing they used a more limited area, drew lines from left to right and made shorter marks.

Name writing in preschool

One of the most important indicators for preschool literacy development is children's skill of name writing (Puranik and Lonigan, 2012). This suggests evidence that children have discovered both oral and written language (Haney et al., 2003). In their daily life, children often come across materials with their names on them (Treiman and Broderick, 1998). Children during preschool realize their names and the letters in their names. They can distinguish their names among other words and are usually able to write their names (Both-de and Bus, 2010; Strickland and Shanahan, 2004; Puranik et al., 2012; Treiman et al., 2007).

Children's name-writing skill also contributes to other literacy skills and plays a role in children's identifying and writing other words (Levin et al., 2005). It is important that children have some basic knowledge about writing and its function before they start writing and they learn it by

focusing on their names (Puranik et al., 2011). Name-writing, therefore, affects children's print awareness and helps them understand the direction and form of the print and the shapes of the letters (Aram and Biron, 2004). Not only does name-writing have an important place in children's literacy development but it can also be used as a means to assess their literacy development because name-writing includes both mechanical skills and conceptual skills (names and sound of the letters, alphabetic principles and so on) (Drouin and Harmon, 2009).

Previous research shows that preschool children have the skill of name-writing and this skill improves with age. Diamond (2008) investigated name-writing skills of 4 year-old children throughout the school year and found that their name-writing skills showed a significant difference at the beginning of the year. Over half of the children started to write their names until the end of the school year. Villaume and Wilson (1989) reported that most of the 3 year-old children and all of those 4 year-olds were able to write their names. Levin et al. (2005) investigated name-writing skills of the children aged 2-5 in Israel and Holland. It was seen that children were able to write their names at an early age in both languages and name writing skills improved with age in both cultures. Chan and Louie (1992) carried out a study with 60 Chinese children aged 2-6 and found age as an important factor in name-writing; 3 year-old children could distinguish the difference between drawing and print and used only one character when writing their names while children of 5 years old used all the characters correctly. Both-de and Bus (2010) reported that 65% of the children aged 4-5.5 could write their names in a legible manner and 27% managed to write one or more letters following the initial letter in their names. Cabell et al. (2009) found that 65% of normally-developed children of four years old could write all the letters in their names correctly while 26% could write three or more letters of their names.

Writing readiness skills in preschool

Writing is composed of physical, intellectual, developmental and interactive processes. Physical process of writing (motor skills) includes skills like holding a pencil, drawing a line, hand movements and writing from left to right (Güneş, 2007). Writing is a complex process requiring more than one sensory system (visual and motor), movement system (planning, sequencing and checking movement) and muscular system (holding the pencil at the appropriate distance) (Berninger et al., 2006). Writing requires coordination of the hand muscles and the visual perception of the letters accurately. Coordination of hand muscles is essential to write words at a certain position and to write letters and use writing tools accurately. Besides these motor skills, a well-developed cognition is also necessary for the writing skill. Fine motor skills and eye-hand coordination are required

for common daily skills such as folding, painting, writing and cutting papers. Delay in skills requiring fine motor movements might cause problems in writing (Ho, 2011). Holding the pencil correctly affects flow and pace of the writing. A good posture and holding the paper still using the helping hand are important in writing (Havens, 2002). Moreover, for the development of writing skills, children need to be aware of concepts like writing, right, left, line, up, down and italic, know that print goes from left to right and from top to bottom on the page and draw lines of the letters smoothly and in the correct direction. Several problems like holding the pencil the wrong way, getting tired easily and feeling reluctant to write might be seen among children lacking these skills (Yangin, 2007).

Significance of the study

Name-writing is related to both cognitive and motor skill development because it indicates that children not only realize the form of writing but they also understand its function. It also relates to literacy perception, namely cognitive development. Children's name writing is an indicator of their literacy development; in fact it is more of a way to construct literacy (Bloodgood, 1999). This skill as being important in preschool children's literacy development has been investigated in a large amount of research (Bloodgood, 1999; Chan and Louie, 1992; Estabrook, 2013; Justice et al., 2005; Levin et al., 2005; Treiman et al., 2007; Villaume and Wilson, 1989; Welsh et al., 2003; Yang and Noel, 2006; Yin and Treiman, 2013). When the objectives to support the writing skills of the preschoolers in Turkey are taken into consideration, it is seen that it is the motor skills that are mostly emphasized and there are no name-writing activities and no researches conducted on name-writing. Yet, name-writing is really important in the development of writing. It emerges developmentally in children and is a significant indicator for children's construction of literacy. Therefore, name-writing skills of preschoolers were analyzed in connection with various variables in the present study. Results from this study are considered important in the sense of presenting the development of writing skills among preschool children.

This study also examined the writing readiness skills – another component of writing skill – in terms of various factors. Evaluated under the title of writing readiness skills, these skills included good posture, holding the pencil correctly, holding the paper correctly, keeping a comfortable eye-paper distance, direction of the writing and line completion. The study in this sense is considered important as it shows the effects on children of the objectives included in preschool program and children's levels of writing readiness skills in primary school.

Although development is holistic, cognitive and motor developments are approached as two distinct domains.

There are scarcely any researches analyzing the relationship between these two domains among normally developed children (Berninger et al., 2006; Ho, 2011). Previous researches mostly focused on the relationship of name-writing with other literacy skills such as phonological awareness, knowledge of letters and print awareness (Blair and Savage, 2006; Drouin and Harmon, 2009; Haney et al., 2003; Justice et al., 2005; Puranik and Lonigan, 2012; Puranik et al., 2011; Welsh et al., 2003). For that reason, the present study analyzed the connection between name writing and writing readiness as two distinct aspects of writing development in pre-school children. In this regard, it is believed the study will contribute to the field.

Purpose of the study

This study has three goals; the first is to evaluate the name-writing skills of preschool children in relation to their gender, school type and age. The second is to investigate writing readiness levels of children by gender, school type and age. And finally it intends to determine the relationship between name-writing skills and writing readiness levels.

METHOD

Participants

The study sample was selected randomly. It was formed by selecting 10% of the children (n: 2334) from public kindergartens and nurseries affiliated to the Ministry of National Education in the province center of Kırıkkale during the 2012-2013 school year. In total, 233 children were recruited. Data from 204 participating children were eligible. The number of the children attending a nursery was 106 (51%) and the number of those attending kindergarten was 98 (49%). Of these children 107 (52%) were girls and 97 (48%) were boys. Of these children 111 (54.4%) were 5 years old, 71 (34.8%) were 4 years old and 22 (10.8%) were 3 years old.

Data-collection tools

Checklist for the evaluation of the writing readiness skills of pre-school children

The checklist is composed of an assessment form including three lines to prepare children for adjacent italic writing and a personal record form where the researcher records his/her observations. In the checklist children receive a score of 1 when they exhibit the appropriate behavior and 0 for the inappropriate one. The overall score ranges from 0 to 11 in the checklist. It is thought that writing readiness skills of children increase as the scores on the checklist increase. Child-sized table and chairs were used in the implementation process. The checklist was administered to each child and took approximately 10 min.

Test-retest reliability of the questionnaire (n: 55) was .90, with inter-rater reliability coefficients (n: 55) ranging from .32 to 1.00 (Alisinanoğlu and Şimşek, 2013).

Observation form for preschool name writing

An Observation Form for Preschool Name Writing was developed by the researcher. Observation forms used in other studies to evaluate the name writing skills of preschool children were analyzed (Bloodgood, 1999; Haney et al., 2003; Estabrook, 2013; Haney, 2002; Ho, 2011; Molfese et al. 2006; Sulzby et al., 1989, Gerde et al., 2012). Items of the observation form were determined following the literature review. Views of the instructors from the field of preschool education were used to modify the items. In the assessment of name-writing skills, 25 of the data forms were selected randomly for reliability and rated by two different persons. The percentage of agreement was 91%.

Name writing skills were scored as follows: refusal to write (0 point), random scribbling (1 point), scribble writing (2 points), making letter-like shapes (3 points), writing a letter or letters randomly (4 points), writing the initial name letter only (5 points), writing two or more name letters randomly (6 points), writing two or more name letters in sequence (7 points), writing all name letters in sequence (8 points), correct spelling of the full name (9 points).

Data collection

Prior authorization was obtained from the Ministry of National Education for the study. Then, pre-interviews were conducted with school administrators and teachers and parental consent forms were obtained for the children. The research data was collected by the researcher. In a quiet environment with child-sized table and chairs, sheets of paper were handed out and children were asked to complete the lines. The researcher, meanwhile, completed the observation form. A blank sheet of paper was provided for each of the children for them to evaluate their name-writing skills; and they were asked to write their names in a given time by asking "Can you write your name?" They were scored on the name-writing task after they finished writing their names.

RESULTS

Analyses of the name-writing skills

An Observation Form for Preschool Name Writing was used to evaluate children's name writing skills. Frequencies and percentages were calculated for children's name writing skills and they are presented in Table 1.

As can be seen in Table 1, only 2% of children (n=4) were able to write their full names. It was found that 9.8% (n=20) of the children refused to write, 1% (n=2) were observed scribbling randomly and 1.5% (n=3) did scribble writing, 14.2% (n=29) of the children made letter-like shapes and 10.3% (n=21) wrote a letter/letters randomly. On the other hand 11.3% (n=23) of the children wrote the initial name letter only while 7.8% (n=16) wrote two or more letters of their names randomly and 6.9% (n=14) wrote two or more letters of their names in sequence, 35% (n=72) of the children were able to write their full names.

Also, distribution of children's name writing skills was examined in relation to their gender, school type and age. Distribution of name writing skills by gender is shown in Table 2 and Figure 1.

The data from Table 2 and Figure 1 indicate that name

Table 1. Frequencies and percentages for name writing skills.

Name writing	f	%
Refusal to write	20	9,8
Random scribbling	2	1,0
Scribble writing	3	1,5
Making letter-like shapes	29	14,2
Writing a letter/letters randomly	21	10,3
Writing the initial name letter only	23	11,3
Writing two or more name letters randomly	16	7,8
Writing two or more name letters in sequence	14	6,9
Writing all name letters in sequence	72	35,3
Correct spelling of the full name	4	2,0
Total	204	100,0

writing skills of girls and boys share similarities. Girls (41.1%), as compared to boys (28.9%), displayed the skill of writing all name letters more often. Table 3 and Figure 2 show the frequencies and percentages of name-writing skills by school type.

The data of Table 3 and Figure 2 demonstrate that there is a similarity between name-writing skills of the children attending nurseries and those from kindergarten. It was found that 1.9% of the nursery children and 2% of the children attending kindergarten managed to write their full names. On the other hand 8.5% of the nursery children and 11.2% of the kindergarten children refused to write. Frequencies and percentages by children's age are given in Table 4 and Figure 3.

As Table 4 and Figure 3 show, 3 year-old children's skill of writing two or more letters of their names and also their skill of writing their full names were not as good as those of 4 and 5 year-old children. It was seen that those who could spell their names correctly were mostly 5 year-old children (45.9%), who were followed by 4 year-olds (25.4%) and 3 year-olds (13,6%). As to making letter-like shapes, the number of 3 year-old children (36.4%) was higher than 4 year-olds (16.9%) and 5 year-old children (8.1%).

Analysis of writing readiness skills

A checklist including 11 items was used to determine the writing readiness levels of children. Frequencies and percentages were calculated based on whether children performed the tasks specified on the checklist. The results are presented in Table 5.

The results reported in Table 5 revealed that, in general, children could display all the writing-readiness skills except I10 and I11. It was found that 51.5% of the children demonstrated the skill specified by item 10 while the skill required by item 11 was displayed by only 35.8% of the children; 64.2% of them failed to carry out this task. It was seen that the children mostly completed the tasks

Table 2. Frequencies and percentages of name-writing skills by gender.

Name writing	Girls		Boys	
	f	%	f	%
Refusal to write	8	7.5	12	12.4
Random scribbling	1	.9	1	1.0
Scribble writing	2	1.9	1	1.0
Making letter-like shapes	15	14.0	14	14.4
Writing a letter/letters randomly	10	9.3	11	11.3
Writing the initial name letter only	9	8.4	14	14.4
Writing two or more name letters randomly	8	7.5	8	8.2
Writing two or more name letters in sequence	7	6.5	7	7.2
Writing all name letters in sequence	44	41.1	28	28.9
Correct spelling of the full name	3	2.8	1	1.0
Total	107	100.0	97	100.0

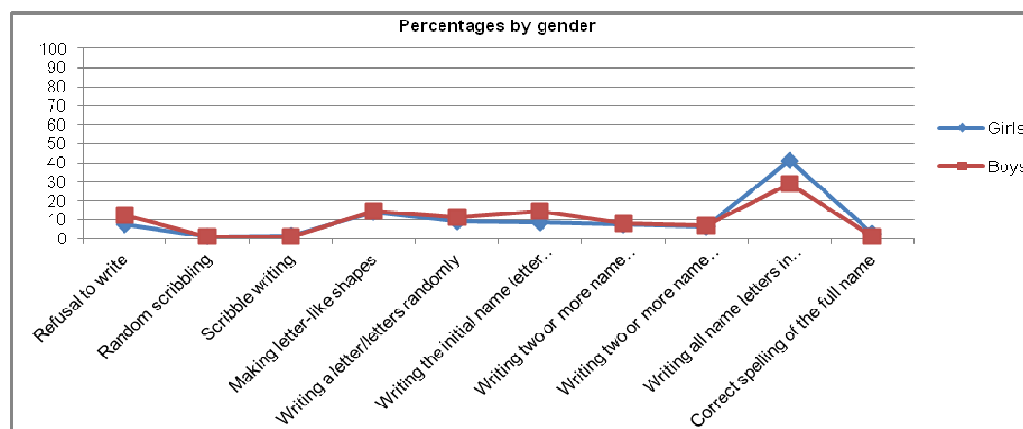


Figure 1. Frequencies and percentages of name-writing skills by gender.

Table 3. Frequencies and percentages of name-writing skills by school type.

Name writing	Nursery		Kindergarten	
	f	%	f	%
Refusal to write	9	8.5	11	11.2
Random scribbling	1	.9	1	1.0
Scribble writing	3	2.8	0	0.0
Making letter-like shapes	19	17.9	10	10.2
Writing a letter/letters randomly	11	10.4	10	10.2
Writing the initial name letter only	13	12.3	10	10.2
Writing two or more name letters randomly	7	6.6	9	9.2
Writing two or more name letters in sequence	5	4.7	9	9.2
Writing all name letters in sequence	36	34.0	36	36.7
Correct spelling of the full name	2	1.9	2	2.0
Total	106	100.0	98	100.0

of 15 (96.6%) and 11 (95.1%). Descriptive statistics for the scores children achieved on the checklist are presented in Table 6.

As understood from Table 6, while there were children who could accomplish all the tasks of the checklist (11.00), there were also children who could complete

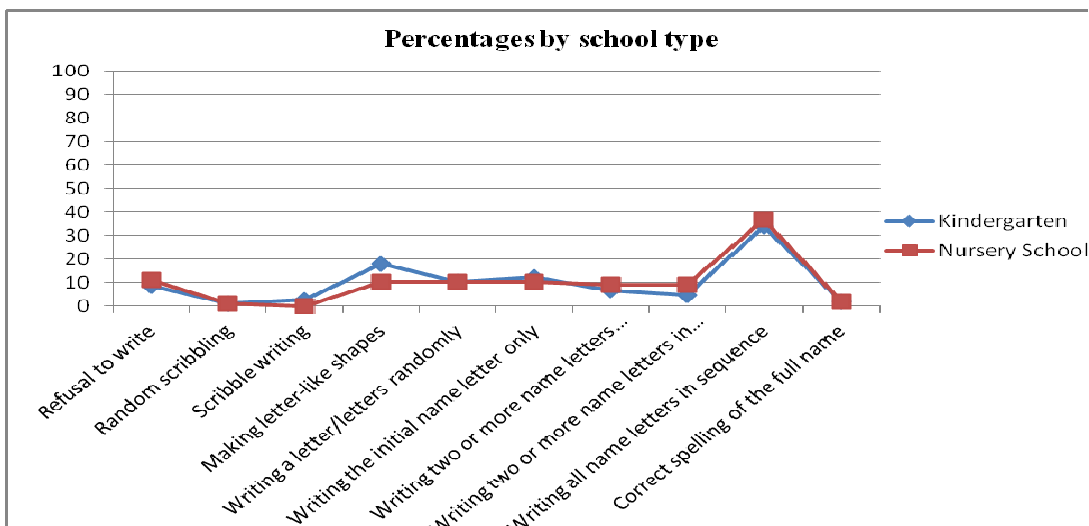


Figure 2. Frequencies and percentages of name-writing skills by school type.

Table 4. Frequencies and percentages of name-writing skills by age.

Name writing	5 years old		4 years old		3 years old	
	f	%	f	%	f	%
Refusal to write	9	8.1	6	8.5	5	22.7
Random scribbling	0	0.0	2	2.8	0	0.0
Scribble writing	0	0.0	2	2.8	1	4.5
Making letter-like shapes	9	8.1	12	16.9	8	36.4
Writing a letter or letters randomly	8	7.2	11	15.5	2	9.1
Writing the initial name letter only	13	11.7	8	11.3	2	9.1
Writing two or more name letters randomly	11	9.9	5	7.0	0	0.0
Writing two or more name letters in sequence	8	7.2	6	8.5	0	0.0
Writing all name letters in sequence	51	45.9	18	25.4	3	13.6
Correct spelling of the full name	2	1.8	1	1.4	1	4.5
Total	111	100.0	71	100.0	22	100.0

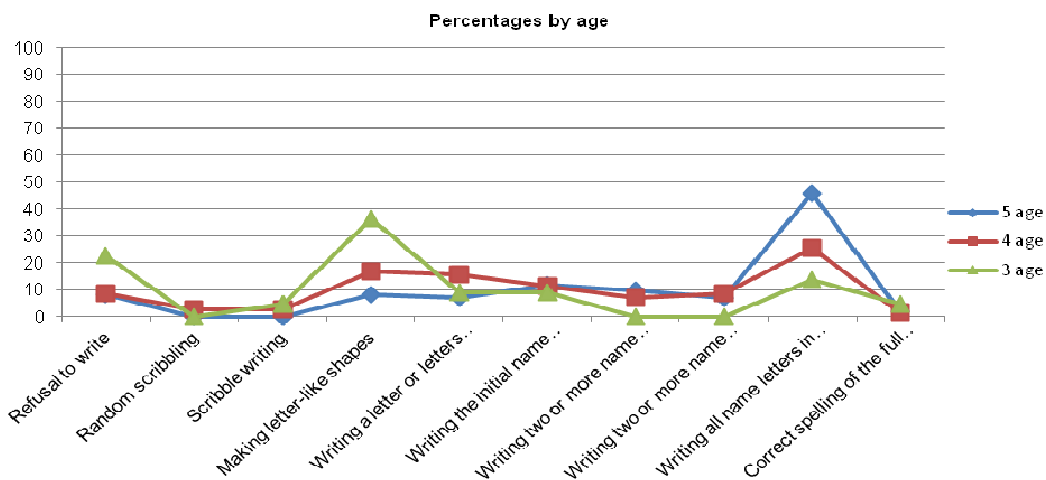


Figure 3. Frequencies and percentages of name-writing skills by age.

Table 5. Frequencies and percentages for the checklist items.

Items	Yes		No	
	f	%	f	%
I1 (Posture)	194	95.1	10	4.9
I2 (Holding pencil correctly)	149	73.0	55	27.0
I3 (Holding pencil at correct distance)	150	73.5	54	26.5
I4 (Holding paper correctly)	146	71.6	58	28.4
I5 (Using helping hand to hold paper still)	197	96.6	7	3.4
I6 (Distance between eye and writing material)	170	83.3	34	16.7
I7 (Direction of writing; left to right)	180	88.2	24	11.8
I8 (Direction of writing; top to bottom)	155	76.0	49	24.0
I9 (1 st line completion)	129	63.2	75	36.8
I10 (2 nd line completion)	105	51.5	99	48.5
I11 (3 rd line completion)	73	35.8	131	64.2

Table 6. Descriptive statistics for writing-readiness skills.

	Number of items	N	Lowest	Highest	\bar{x}	SD
Writing readiness	11	204	0.00	11.00	8.08	2.05

Table 7. Independent samples t-test results for gender comparisons.

Gender	N	\bar{x}	SS	t	p
Girls	107	8,18	1,87	0,725	0,469
Boys	97	9,97	2,23		

Table 8. Independent samples t-test results for school types.

School type	N	\bar{x}	SD	t	p
Nursery	106	7.80	2.31	2.019	0.045*
Kindergarten	98	8,38	1,69		

* p<0,05.

none of the 11 tasks specified in the checklist (0.00). The mean score children achieved in the writing-readiness test was 8.08. It could be argued that children had a high level of writing readiness skill since the mean value calculated was closer to the highest score than to the lowest one. It was found that writing-readiness levels of children were above the average.

Independent samples t-test was conducted to determine whether writing-readiness skills of children differed or not based on their gender. The results can be seen in Table 7.

According to the results of Table 7, no significant difference was found between writing-readiness levels of girls and boys ($p>0.05$). In other words, writing-readiness levels of girls and boys were similar. Independent samples t-test was conducted to see whether writing-readiness skills of children showed a significant difference in relation to their school type. The results are presented in Table 8.

As can be seen in Table 8, children's writing-readiness levels differed significantly according to the types of their school ($p<0,05$). Mean scores indicate that writing

readiness levels of the children attending kindergarten (8.38) were significantly higher than those of the children attending nurseries (7.80). In other words, the difference of 0.58 points between children's writing-readiness levels was significant in favor of those attending kindergarten.

A one-way analysis of variance was performed in order to determine whether statistically significant differences existed between the groups with respect to their age. The results are given in Table 9.

Table 9 shows that a significant difference existed between the writing-readiness levels of at least two of the age groups which were 5, 4 and 3 year olds ($p<0,05$). A multiple comparison (LSD) test was used to test between which two groups there was a significant difference. The results are shown in Table 10.

LSD test results in Table 10 show a similarity but no significant difference between writing-readiness levels of 3 and 4 year-old children ($p>0,05$). Writing-readiness levels of 5 year-olds were significantly higher than those of 3 and 4 year-old children ($p<0,05$).

Table 9. Results of the one-way analysis of variance for children’s age.

Source of variance	Sum of squares	sd	Mean of squares	F	p
Inter-group	50,860	2	25,430	6,374	,002*
Intra-group	801,885	201	3,989		
Total	852,745	203			

*p<0,05.

Table 10. LSD results for writing-readiness levels based on age.

Age (I)	Age (J)	Mean Difference (I-J)	SE	p
5	4	.93998(*)	.30353	.002
	3	1.16790(*)	.46613	.013
4	5	-.93998(*)	.30353	.002
	3	.22791	.48737	.641
3	5	-1.16790(*)	.46613	.013
	4	-.22791	.48737	.641

* p<0.05

Table 11. Descriptive statistics for the levels of writing readiness based on name writing skills.

Writing activities	N	Lowest	Highest	\bar{X}	SD
Refusal to write	20	5.00	11.00	7.80	1.67
Random scribbling	2	.00	9.00	4.50	6.36
Scribble writing	3	6.00	9.00	7.67	1.53
Making letter-like shapes	29	3.00	10.00	6.97	1.90
Writing a letter or letters randomly	21	3.00	11.00	7.67	2.03
Writing the initial name letter only	23	4.00	11.00	7.48	2.25
Writing two or more name letters randomly	16	5.00	11.00	8.69	1.70
Writing two or more name letters in sequence	14	7.00	10.00	8.79	1.12
Writing all name letters in sequence	72	1.00	11.00	8.67	1.94
Correct spelling of the full name	4	8.00	11.00	9.75	1.50

Analysis of the relationship between name writing and writing-readiness skills

In order to analyze the relationships between name writing and writing-readiness levels of children, descriptive statistics for writing-readiness levels were produced based on children’s name-writing skills. The results are given in Table 11.

As seen in Table 11, mean scores of writing-readiness among children who were able to write their full names (9.75) were higher than those of children at other writing levels. It was seen that children observed scribbling randomly had lower mean scores (4.50) than children at other name-writing levels. Nevertheless, mean scores of writing-readiness (7.80) remained above the average for the children who refused to write. Writing-readiness levels of the children other than those who made random scribbles were found to be above the average, as shown

Table 12. The relationship between children’s levels of writing readiness and name-writing skills.

Variables	Values	Levels of writing readiness
	r	.285(*)
Name-writing skills	p	.000
	N	204

*p<0.05.

in Table 11.

The correlation between children’s levels of name-writing and writing-readiness is presented in Table 12.

According to Table 12, a positive but low correlation was found between children’s levels of writing readiness and name-writing skills (p<0,05).

To put it differently, as children’s levels of writing-

readiness increased, their writing skills tended to increase slightly.

DISCUSSION

This study has three goals regarding the writing skills of preschool children. Firstly, it aims to examine the name-writing skills of children and determine whether these skills differ significantly based on the variables of gender, school type and age. Secondly, it attempts to investigate their writing-readiness levels in relation to their gender, school type and age. And finally it aims to determine the relationship between name-writing skills and writing readiness levels. In the first place, name-writing skills and writing readiness levels of children were analyzed in relation to the variables of gender, school type and age. Their name-writing skills and writing-readiness levels were then compared.

Name-writing skill in children is considered to be one of the most important indicators of literacy skills (Haney et al., 2003; Puranik and Lonigan, 2012). This study therefore examined the development of preschool children's name-writing skill as being an important aspect of literacy development and it was concluded that children were able to write their names during this age. Results of the present study are supported by those of previous studies. A large body of research has shown that preschoolers with different cultural backgrounds and language structures have the ability to write their names though they do not know formal reading and writing (Both-de and Bus, 2010; Cabell et al., 2009; Chan and Louie, 1992; Levin et al. 2005; Treiman et al., 2007; Villaume and Wilson, 1989; Yin and Treiman, 2013). In this study, it was seen that children were able to write the letters in their names and 35% of them were able to write all the letters of their names in the correct order. Preschool education program in Turkey does not include activities to teach letters and writing (MEB, 2013: 44). This once more shows that writing development in preschoolers is not only a developmental trait but is also affected by the environmental stimuli.

Another result of the present study was that there was a similarity in name-writing between girls and boys. Previous research found different results regarding the effect of gender on writing skills. Haney et al. (2003) reported that gender does not have a significant effect on name-writing while Puranik et al. (2012) found that girls are more successful in letter-writing than boys. Justice et al. (2005) also reported a similar result that girls had higher scores, as compared to boys, in relation to name-writing skills.

According to the results of this study, there was a similarity between name-writing skills of the children attending kindergarten and those of the children attending nurseries. No study was found in the literature that focuses on the effect of school type on the name-writing

skills of children. More studies, therefore, are needed that examine the effect of school type on name-writing skill.

In this study it was observed that name writing skills develop with age and the tasks *writing the initial name letter only*, *writing two or more name letters* and *writing two or more name letters in sequence* were better performed by 5 year-old children than those 3 and 4 year-old ones. Other research also confirmed that name-writing develops with age (Bloodgood, 1999; Chan and Louie, 1992; Estabrook, 2013; Justice et al., 2005; Villaume and Wilson, 1989; Welsh et al., 2003; Yang and Noel, 2006; Yin and Treiman, 2013).

Results indicated that children's writing-readiness levels remained above the average. Çelenk (2008) reported that preschool education helps children gain valuable experiences for primary education and has an impact on their levels of writing readiness. Given the preschool education program in Turkey (MEB, 2006; MEB, 2013), this is an expected result because preschool teachers, within the scope of reading-writing activities, are expected to have their children do activities in relation to use of pencil hand skills (holding pencil correctly, pencil control, drawing, painting, cutting, folding, kneading, sticking).

Results of the study revealed that age plays an important role in writing-readiness skills. It was found that age was a significant factor in writing readiness and writing-readiness scores of 5 year-old children were higher than those of 3 and 4 year-olds. Previous research showed that skills concerning movement and posture and also writing skills develop with age (Havens, 2002; Trivette et al., 2013).

As in the name-writing skills, age is an important factor in writing-readiness level. Writing readiness level is also a developmental trait, so it is thought to show a significant difference based on age. Yet, the effect of the education programs in preschool institutions should not be disregarded as writing-readiness activities are mostly carried out by 5 year-olds. As a result, it could be argued that both developmental and environmental factors play a role in higher levels of writing readiness among 5 year-old children.

Another result from the present study is that there is a significant difference in the writing-readiness level in favor of the children attending kindergarten. The goal of kindergarten education is to prepare children for primary education. Accordingly, activities such as pencil holding and drawing lines for writing-readiness to support writing skills are observed more often in kindergarten than in nurseries. It could be argued therefore that although the same program is used in nurseries and classes, the differences in the implementation of the program are likely to affect children's skills of writing readiness. As reported by Rowe and Neitzel (2010), children's interests and their interactions with materials and other people have an impact on the activities they do, which results in differences in their writing experiences. So, it could be

suggested that educational opportunities provided for children seem effective in their writing-readiness skills.

In this study, name-writing skills of children attending nurseries were found to be similar to those of children attending kindergarten, yet there was a significant difference in writing-readiness in favor of nursery-class children. The relationship between children's name-writing skill and other literacy skills was examined in previous studies (Justice et al., 2005; Puranik and Lonigan, 2012). A significant correlation was found between name-writing and phonological awareness (naming lower cases and upper cases, recognizing letters and letter sounds) and name-writing by Drouin and Harmon (2009) and between name-writing and recognizing meaningful and meaningless words by Haney et al. (2003). Puranik et al. (2011) found a relationship between name-writing skill and print-knowledge. According to the results of the study conducted by Welsh et al. (2003), name-writing skill develops concurrently with print and phonological awareness. Therefore, supporting children's name-writing skill is considered important in the sense of improving their literacy skills. In this study, the writing-readiness levels of preschool children (good posture, holding the pencil correctly, holding the paper correctly, keeping an appropriate eye-paper distance, direction of the writing, line completion) were examined based on their name-writing skills. It was found that writing-readiness levels of the children scribbling randomly were lower than those of other children while the children who were able to write their full names had higher mean scores of writing readiness when compared to other children. A positive but low correlation was detected between the children's levels of writing readiness and their name-writing skills. As children's levels of writing-readiness increased, their writing skills tended to increase slightly, which is considered natural because both name-writing and writing-readiness develop with age. Results from previous studies showed a relationship between the name-writing skills of preschoolers and their skills concerning physical aspect of writing (motor skills). Gerde et al. (2012) found that preschool motor skills account for 11.8% of name-writing skills. In another study, Havens (2002) detected a positive correlation between name-writing skills and motor and postural skills. There are also studies suggesting that there is no significant relationship between name-writing and motor skills. For example, a study by Ho (2011) found no statistically significant relationship between fine-motor skills and name-writing skill.

It was also seen that children refused to write, which is a striking result of the study. Ho (2011) found that 11.3% of children (N:73) reported that they did not want to write and it was underlined that this stage has a central role in children's writing development and it should not be regarded as the first stage but at a more advanced stage in children's writing development. A similar finding was

also reached in this study; 20% of the children did not want to write. It was observed that writing-readiness scores of these children were higher when compared to those who randomly scribbled, made writing-like scribbles, drew letter-like shapes, wrote a letter/letters randomly and wrote the initial name letter only. This could be interpreted as that the children who refused to write have a higher level of print awareness.

Conclusion

The present study showed that preschool children's name-writing skill – or in other words, realizing and writing the letters in their names – is a developmental quality and is observed in children though not included in the education program. Name-writing skill as an important skill in children's learning to write and read needs to be integrated into the preschool education program and activities should be planned as a part of daily activities. It was seen in the study that children had a high level of writing-readiness. It is evident that activities carried out as a part of preschool program to develop children's writing-readiness skills have supported motor skill of children's. In the study, a connection was found between children's writing-readiness level and their name-writing skills. Therefore, development of children's writing skills should be evaluated adopting a holistic approach and the education program should be shaped accordingly.

An important limitation of this study is that it does not discuss the effect of literacy environment on name-writing and writing-readiness skills. Educational opportunities provided for children at home and school play a crucial role in children's writing development. Future studies can help determine the effect of literacy environment created at home and school on children's writing development and the effect of current name-writing and writing-readiness skills on the future reading and writing skills of children.

Conflict of Interests

The author has not declared any conflict of interest.

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