

Full Length Research Paper

Analogy of lower and capital letters of vertical and italic handwriting in first grade literacy

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This study has been carried out in order to determine the status of the analogy drawn with the capital and lower letters in vertical and italic handwriting by teachers working in the first grade classes of primary schools. The research has been conducted on 151 first grade teachers working in Turkey. The data was acquired by means of a questionnaire which was developed by the researcher. In data analysis process, SPSS program was utilized and frequencies, percentages and chi-square test were used. The research revealed that primary school teachers use following analogies: In capital letters, “glasses” for “B”, “comb” for “E”, “ladder” for “H”, “handle of an umbrella” for “J”, “snake” for “S” and “catapult” for “Y”; in italic handwriting, “crescent” for “C”, “reverse of 3” for “E” and “mountain chain” for “M”; in lower letters, “glasses with a broken lens” for “b”, “pipe wrench” for “f”, “chair” for “h”, “tunnel entrance” for “n” and “a glass” for “u”; “bent chair” for “h”, “stick” for “l”, “knob” for “p” and “duck” for “s”.

Key words: First grade literacy, writing types, analogy, letter analogy.

INTRODUCTION

Though education is perceived as a continuously changing and developing behavior orientation process, it requires some specific knowledge and experience. So as to establish principles revealing this fact, it is highly important to know about and examine improvements and developments followed by education in its historical process. Scientists have utilized analogies so as to provide children and the young with basic concepts as from the historical beginning of the education (Brown, 1994: 202-205; Harrison, 1993: 1291). Piaget declared that analogy is an important method in teaching process in terms of child development (Goswami, 1991: 3).

Analogy assumes an explanatory function when it replaces new concepts and principles in familiar terms. Also concretizing abstract thoughts explains analogies (Glynn, 1989: 383). In this regard, analogies are important in concreting abstract concepts and beings for students and assist teachers (Grosslight et al., 1991: 801; Ekici et al., 2007: 97; Bilaloğlu, 2005: 72). Curtis and Reigeluth (1984: 101) declared that analogies take a structural shape for simple concepts (apparent analogy); a functional shape for abstract concepts and; thereby they are more beneficial in teaching complex and difficult

concepts in educational process. Additionally it is declared that analogies aid to connect with the knowledge available in brains of the students and new knowledge to be acquired (Pittman, 1999: 1).

Recent developments have revealed that analogies work as an important mechanism in building information in the brain (James et al., 2007: 566). It has been determined that analogies facilitates understanding and has a major effect on problem solving (Duit, 1991: 650-653). Analogies play an important role in conceptual change learning and dreaming abstract information by students, facilitating understanding, enhancing students' attention, and taking into consideration previous knowledge of students (Harrison et al., 1993: 1292; Brown, 1994: 213).

It is known that primary and middle school teachers enrich their oral statements and explanations by means of analogy (Dagher et al., 1992: 363). Although course plan, cautious and programmed presentation and feedback are always important for teachers, such properties gain more importance in use of analogies (Baker et al., 2001). As for Harrison and De Jong' (2005: 1137) analogies drawn by students are satisfactory. Analogies drawn by

teachers are easy to be received by students but difficult to be kept in mind and mapped. Analogies drawn by students are easy to be mapped for students but difficult to be generalized.

Researches conducted revealed that analogies drawn by teachers are quite powerful learning tool (James et al., 2007: 566). However students can apply learning on their own experience, lives and real world and make sense of the same easier in learning process when they internalize the information provided in respective sources (Chin et al., 2000: 112,113). In this respect, it is apparent that students are more effective in generalizing analogies they draw, evaluating, reformulating their explanations, and generating conceptual meanings (Wong, 1993: 1259-1263).

We generally use analogies while talking about familiar facts, perceiving abstract ideas and thinking in a creative manner. Since models based on analogy explain scientific notions in a more familiar, visual and comprehensible manner, they appeal to especially teachers and students (Glynn, 1991: 383-393). Some researches' results reveal that teachers do not have sufficient analogy accumulation; they only provide students with the knowledge on books and this case contradicts with constructive teaching (Treagust, 1990: 93-95).

Analogies ensure concepts provided in course books to be reminded, topics therein to be comprehensible and material to be utilized in a better way (Baker et al., 2001: 667). Analogies should be supported with illustrations where possible (Guler et al., 2008: 120). "Thiele and Treagust (1991) and Shapiro (1985) underline that illustrated analogies are important for students to understand and envisage the subject (Bilgin et al., 2001). Though there are many experimental studies on how analogies function in learning process, it is very little known about actual usage thereof in classroom. When analyzing the use of analogies in course books, it is seen that frequency of analogy usage therein varies between 'quite rare' and 'rare'; and analogies drawn are generally quite simple. While simple, superficial and brief analogies are utilized at the level of primary school, more complex analogies encouraging students to think are available in middle school and university course books (Duit, 1991: 651-655).

Many researchers found out that children direct questions based on analogy (Rule et al., 2008: 1166). As a result of their research, Atasoy et al. (2007: 679-700), detected that imaginative skills of students affect analogy drawing and creativeness. By analogy, students define objects through deriving from elements within the object box. Afterward, students can draw analogies based on analysis, synthesis and creation in a manner to develop their learning skills (Rule et al., 2008: 1160). Saouma and Rana (1998: 22-25) studied on the educational value of analogies as to success and perception of primary school students and found out that analogies drawn in respect

respect of previous knowledge of students make a positive affect on students' success.

In the research based on an interview with children of 6 and 7 ages, Gallas (1992: 172-181), determined that children are talented at analogy use by encouraging and talking, and continuation of this talent provides parents to be in a continuous communication with their children and use their imagination by means of assist and motivation. May et al. (2006: 327, 328) conducted a study including analogy method on preschool students and earthquakes. As a result hereof, it was revealed that the use of analogy is not a foreign field for students. Iding (1997:248) revealed that use of analogies in teaching process results in more effective and productive learning and enhances interests, motivations and conducts of students.

As for Turkish teaching, it is essential to create multi-stimulus education environments so as to include interest and requirements, different students in learning-teaching activities (Sever et al., 2006: 22). Herein the basic duty and responsibility for creating such environments belongs to teachers. If a teacher conducts the literacy teaching process by means of various analogies and teaching materials, he provides an individualized and effective literacy teaching. Curtis and Reigeluth (1984: 100-104) underlined that, it is required to prefer illustrated-oral analogies for low-ability students. It is essential not to forget that the most important task belongs to the teacher for conducting an individualized literacy teaching process based on full learning.

Within the literacy teaching process, abstract letter and visual symbols in letter and handwriting teaching constitute problems for students in perceiving and understanding the letters. Roles of analogies were underlined by many researchers in respect of concreting the abstract letter and visual symbols and getting the course subjects clearer. "Dyson and Genishi (1991) declared that socialization; experience and visual skills play an important role in handwriting learning by children" (Everett, 2006: 21). "As for Curtis and Reigeluth (1984), diagrams and illustrations enable hard-to-understand concepts within the illustrated analogies to be understood and some oral expressions accompany most of them (Atav et al., 2004: 22). Children store appearance (shape) of a letter in a graphic form. Afterwards they store words and later sentences based on those letters (Güneş, 2000: 65).

Handwriting process includes a series of complex event. Students initially perceive message received and keep it in their mind. Later on, they initiate to write the first word and continue writing process word by word through taking into account characteristics of the following words. While children are writing the first word, they head for the whole of the message and consider the following word. During the handwriting process, children utilize symbols (Askew et al., 1999: 43). "Berninger et al. (2006) declared that handwriting teaching supported by visual and oral elements and materials enhances reading and handwriting

Table 1. General distribution of participating teachers by gender variable.

Gender	f	%
Male	76	50.3
Female	75	49.7
Total	151	100

skills" (Foundations for Literacy, 2009: 69).

Concreting voices and letters in primary literacy teaching and communicating the same to the students with a method based on analogy provide permanent and productive learning. Form teachers conduct it via voice and letter analogy method in teaching process. For instance teachers concrete, in other words, draw analogy with the voice of "aaaa" as an expression of amazement, and voice of "eeee" as a voice of "putting a baby to sleep. Also, drawing analogy with handwriting including quite complex shapes and figures for a child is important for conducting an effective and productive literacy teaching process. Although italic handwriting has many advantages in terms of fast and aesthetic writing, its is known by teachers that italic handwriting cause problems in teaching process through concreting letters namely drawing analogy based on a concrete object in first grade literacy teaching process. It is possible to eliminate this problem through conducting first grade literacy teaching by means of teaching materials and drawing oral and visual analogies with students. This research is important in terms of drawing analogy with 29 main letters of Turkish language in accordance with writing types and conducting a more effective and productive first grade teaching process based thereon.

METHOD

Purpose of the research

This study has been carried out in order to determine the status of the analogy drawn with the capital and lower letters in vertical and italic handwriting by teachers working in the first grade classes of primary schools and detect teachers' preferences on handwriting type within the primary literacy teaching process.

Model of the research

The research is based on the descriptive scanning model. The data was acquired by means of a questionnaire which was developed by the researcher.

Population and sample

The population of the research composes of all first grade teachers working in the primary school in Turkey in 2009-2010 educational periods.

The population of the research composes of 151 first grade teachers working in Elazig in 2009-2010 educational periods.

Data collection and analysis

Data was acquired via questionnaire prepared by the researcher for this study that was carried out in order to determine the status of the analogy drawn with the capital and lower letters in vertical and italic handwriting by teachers working in the first grade classes of primary schools and detect teachers' preferences on handwriting type within the primary literacy teaching process. While acquiring data, the researcher explained the analogy method with some examples, and requested teachers to draw analogy with capital and lower letters specified in the questionnaire form within a week.

For the analysis of data, SPSS statistical package program was utilized. The frequency and percentage were used so as to analyze data acquired with the research; exposure to variables based on demographic data of handwriting type of teacher was evaluated via chi-square test.

FINDINGS

Here, findings acquired in respect of research results were demonstrated and evaluated in tables.

General distribution of the teachers participating in the research by gender variable

General distribution of the participating teachers by gender variable is provided in the Table 1. When analyzing Table 1, it is seen that 50.3% of the participating form-teachers is male and 49.7% thereof is female.

Comparison between analogies drawn with capital letters by teachers according to their handwritings

Comparison between analogies drawn with capital letters by teachers according to their handwritings is provided in the Table 2.

When analyzing Table 2 prepared for the comparison among analogies drawn with capital letters according to teachers' handwriting types, as a result of chi-square test applied it is seen that there is significant difference among all the letters at the level of $p < 0.05$. All of those differences are in favor of main vertical letters. It reveals that more analogy is drawn with all capital letters of main vertical handwriting type rather than italic handwriting in the first grade literacy teaching. This outcome can be interpreted that capital letters of main vertical handwriting

Table 2. Analogies drawn with capital letters by teachers according to their handwritings.

Handwriting type	Number of analogies		Handwriting type	Number of analogies		X ²	p
Vertical handwriting	f	%	Italic handwriting	f	%		
A	113	74.83	A	54	35.76	46.629	0.000*
B	134	88.74	B	58	38.41	82.592	0.000*
C	132	87.41	C	84	55.62	37.457	0.000*
Ç	82	54.30	Ç	46	30.46	17.573	0.000*
D	109	72.18	D	46	30.46	52.606	0.000*
E	147	97.35	E	91	60.26	62.176	0.000*
F	118	78.14	F	33	21.85	95.695	0.000*
G	49	32.45	G	31	20.52	5.509	0.019*
Ğ	31	20.52	Ğ	18	11.92	4.117	0.042*
H	136	90.06	H	15	9.93	193.902	0.000*
I.	134	88.74	I.	29	19.20	147.002	0.000*
İ	79	52.31	İ	20	13.24	52.309	0.000*
J	148	98.01	J	15	9.93	235.802	0.000*
K	62	41.05	K	44	29.13	4.710	0.030*
L	98	64.90	L	22	14.56	79.870	0.000*
M:	96	63.57	M	78	51.65	4.393	0.036*
N	50	33.11	N	15	9.93	24.015	0.000*
O	140	92.71	O	44	29.13	128.202	0.000*
Ö	70	46.35	Ö	17	11.25	45.352	0.000*
P	101	66.88	P	40	26.49	49.502	0.000*
R	40	26.49	R	11	7.28	19.841	0.000*
S	133	88.07	S	49	32.45	97.569	0.000*
Ş	77	50.99	Ş	20	13.24	49.344	0.000*
T	128	84.76	T	49	32.45	85.188	0.000*
U	136	90.06	U	49	32.45	105.602	0.000*
Ü	60	39.73	Ü	17	11.25	32.231	0.000*
V	113	74.83	V	25	16.55	103.302	0.000*
Y	140	92.71	Y	27	17.88	171.002	0.000*
Z	65	43.04	Z	9	5.96	56.133	0.000*

*p < 0.05; df = 1.

type are more symmetric in comparison to capital letters of italic handwriting type and more analogies are drawn between those and concrete items.

When analyzing Table 3, it is seen that first grade form- teachers participated in the research rather draw analogy with lower (c, h, l, m, o, s) letters of vertical handwriting type and with capital (c, ç, l, o) letters of italic handwriting type.

Comparison between analogies drawn with capital letters by teachers according to their handwritings

Comparison between analogies drawn with capital letters by teachers according to their handwritings is provided in the Table 3.

When analyzing Table 3 prepared for the comparison among analogies drawn with lower letters according to teachers' handwriting types, as a result of chi-square test

applied it is seen that there is significant difference among all the letters at the level of $p < 0.05$. All of those differences are in favor of vertical main letters. It reveals that more analogy is drawn with all lower letters of main vertical handwriting type rather than italic handwriting in the first grade literacy teaching. This outcome can be interpreted that lower letters of main vertical handwriting type are more symmetric in comparison to lower letters of italic handwriting type and more analogies are drawn between those and concrete items.

Distribution regarding three objects and capital letters with which analogies are drawn by participating teachers according to their handwritings

Distribution regarding three objects and capital letters with which analogies are drawn by teachers according to their

Table 3. Analogies drawn with lower letters by teachers according to their handwritings.

Handwriting type	Number of Analogies		Handwriting type	Number of Analogies		X ²	p
	f	%		f	%		
Vertical Handwriting			Italic Handwriting				
a	62	41.06	a	8	5.29	54.226	0.000*
b	98	64.90	b	14	9.27	100.102	0.000*
c.	108	71.52	c.	45	29.80	52.579	0.000*
ç	72	47.68	ç	32	21.19	23.465	0.000*
d	65	43.04	d	20	13.24	33.155	0.000*
e	39	25.82	e	17	11.25	10.610	0.001*
f	86	56.95	f	27	17.88	49.223	0.000*
g	28	18.54	g	10	6.62	9.754	0.002*
ğ	13	8.60	ğ	4	2.64	5.049	0.025*
h	117	77.48	h	28	18.54	105.102	0.000*
ı	102	67.54	ı	17	11.25	100.202	0.000*
i	68	45.03	i	17	11.25	42.586	0.000*
j	72	47.68	j	12	7.94	59.371	0.000*
k	45	29.80	k	15	9.93	18.719	0.000*
l	117	77.48	l	37	24.50	84.802	0.000*
m	104	68.87	m	25	16.55	84.455	0.000*
n	99	65.56	n	15	9.93	99.427	0.000*
o	148	98.01	o	35	23.17	177.102	0.000*
ö	65	43.04	ö	10	6.62	53.659	0.000*
p	67	44.37	p	23	15.23	30.643	0.000*
r	80	52.98	r	21	13.90	51.784	0.000*
s	110	72.84	s	33	21.85	78.751	0.000*
ş	65	43.04	ş	26	17.21	23.923	0.000*
t	86	56.95	t	26	17.21	51.090	0.000*
u	100	66.22	u	24	15.89	79.030	0.000*
ü	44	29.13	ü	11	7.28	24.209	0.000*
v	93	61.58	v	6	3.97	113.702	0.000*
y	71	47.01	y	13	8.60	55.479	0.000*
z	44	29.13	z	8	5.29	30.107	0.000*

*p < 0.05; df = 1.

handwritings is provided in the Table 4.

When analyzing Table 4, it is seen that form-teachers draw analogy mostly between letter B and “glasses”; letter E and “comb”; letter H and “ladder”; letter J and “umbrella handle”; letter S and “snake” and; letter Y and “catapult” for the capital letters of vertical handwriting type. When analyzing Table 4, it is seen that form-teachers draw analogy mostly between letter C and “moon, crescent”; letter E and “reverse of number 3”; letter M and “mountain chain”; letter U and “mug”; for the capital letters of italic handwriting type.

Distribution regarding three objects and lower letters with which analogies are drawn by teachers according to their handwritings

Distribution regarding three objects and lower letters with which analogies are drawn by teachers according to handwritings is provided in the Table 5.

When analyzing Table 5, it is seen that form-teachers draw analogy mostly between letter b and “glasses with broken lens”; letter f and “pipe wrench”; letter h and “chair”; letter l and “stick”; letter n and “tunnel entrance”; letter s and “little snake” and; letter u and “glass” for the lower letters of vertical handwriting type. When analyzing Table 5, it is seen that form-teachers draw analogy mostly between letter c and “moon, crescent”; letter h and “bent ladder”; letter l and “walkingstick”; letter p and “knob”; and letter s and “duck” for the lower letters of italic handwriting type.

Participating teachers' preference on handwritings according to letters

Distribution of the teachers' preference on handwritings by letters is provided in the Table 6.

When analyzing Table 6 drawn up for the distribution of the teachers' preference on handwritings by letters, it is

Table 4. The three objects and capital letters between which analogy is mostly drawn.

Ver. H.	1 st object (f)	2 nd object (f)	3 rd object (f)	lt. H.	1 st object (f)	2 nd object (f)	3 rd object (f)
A	Roof (48)	Tent (34)	Clothespin (12)	A	Slide (10)	Tent (10)	Roof (9)
B	Glasses (124)	Binoculars (1)	Butterfly (1)	B	Glasses (34)	Binoculars (17)	Curved glasses (2)
C	Moon, crescent(103)	Bitten bagel (8)	Ear (3)	C	Moon, crescent(64)	Bitten bagel (5)	Horseshoe (3)
Ç	Hooked moon, crescent (29)	Ear and earlobe (10)	Hook (9)	Ç	Hooked moon, crescent (29)	Pinna with earring (8)	Hook (8)
D	Demilune (21)	Göbek(11)	Watermelon Slice(7)	D	Sailing boat (24)	Göbek(4)	Demilune (4)
E	Comb (126)	Harrow(9)	Fence(5)	E	Reverse of number 3	Bird (6)	Daisy leaf (2)
F	Broken comb (67)	Comb (14)	Pipe wrench (13)	F	Brush (13)	Toothbrush (6)	Curved, broken comb (3)
G	Bentwire (16)	Snail(9)	Face, mug (2)	G	C with tail (5)	Crescent with tail (3)	Coffeepot(3)
Ğ	Hatted wire(10)	Hatted snail(4)	Spoon (2)	Ğ	C with hat and tail (6)	G with hat and tail (2)	Hatted mouth (1)
H	Ladder (99)	Bridge (17)	Train rail (6)	H	Ladder (5)	Ladder with rope (2)	Dumbbell(2)
I.	Stick (71)	Rod(19)	Pillar(10)	I	Candle(6)	Walkingstick (5)	Stick (5)
İ	Dotted Stick (20)	Pencil with eraser (10)	Candle(9)	İ	Candle(11)	Dotted Stick (4)	Dotted walkingstick (2)
J	Umbrella handle (63)	Walkingstick (55)	Hook (12)	J	Golf club(4)	Walkingstick (2)	Candlestick (2)
K	Scissors (16)	Table(12)	Butterfly (10)	K	Two roads crossing each other(17)	Scissors (12)	Butterfly (5)
L	Door handle(24)	Boot (11)	Armchair (11)	L	Nippers (4)	Octopus (3)	Armchair (3)
M	Mountain (43)	Bird (25)	Rabbit ear(5)	M	Mountain chain (40)	Gull(14)	Elephant(6)
N	Gull with broken arm (11)	Lateral "Z" (6)	Broken meter (2)	N	Mountain chain (7)	Slope (2)	Broken meter (1)
O	Bagel(56)	Ball(33)	Wheel(25)	O	Bagel(8)	Juice with straw (6)	Halka tattli (round-shaped dessert) (4)
Ö	Big bagel with sesame (22)	Ladybird (7)	Dotted ball(6)	Ö	Girl with buckle (4)	Dotted bagel (3)	Dotted balloon (2)
P	Broken Glasses (24)	Knob (17)	Flag (9)	P	Ladle (14)	Knob (8)	Flag (4)
R	Nutcracker (19)	Nail scissors(8)	Camera with pod(2)	R	Walking man(2)	Ribbon (2)	Camera with pedestal (1)
S	Snake(116)	Waterway(7)	Hose(3)	S	Snake(10)	Swan(9)	Hawser (5)

Table 4. Contd.

Ş	Rattlesnake (56)	Stream (6)	Currency symbol, dollar (6)	Ş	Snake(5)	Anchor (2)	Duck (2)
T	Pillar(61)	Hammer(18)	Pickaxe(8)	T	Umbrella (19)	Mushroom(9)	Telephone pole(5)
U	Glass (80)	Horseshoe (17)	Magnet (13)	U	Mug (40)	Jug(2)	Horseshoe (2)
Ü	Dotted glass (22)	Glass in which sugar is put (5)	Dotted magnet (5)	Ü	Dotted cup (7)	Mug with sugar (3)	Steamy glass (2)
V	Vase(15)	Dustbin(15)	Valley(8)	V	Funnel(5)	Rabbit ear(5)	Vase(3)
Y	Catapult(78)	Tree (16)	Fork(8)	Y	Capital “U” with tail (8)	Glass with tail (4)	Catapult(2)
Z	Zigzag (17)	Ladder (16)	Sandglass(7)	Z	Cobra (3)	Ladder (2)	Shelf (2)

seen that form-teachers are willing to prefer basic vertical letters for all the letters except for capital letters C, Ç, E, M and N within the first grade literacy teaching process.

When analyzing Table 6, it is seen that form-teachers are willing to prefer basic vertical letters for all the letters except for lower letters c, ç, e, and u within the first grade literacy teaching process.

Comparison among participating teachers' preferences on handwriting types with capital letters according to gender variable

Distribution regarding the comparison among participating teachers' preferences on handwriting types with capital letters according to gender variable is provided in the Table 7. In this section only data based on letters showed significant difference at the level of $p < 0.05$ was also included in the table and evaluated.

When analyzing Table 7 prepared for the distribution regarding the comparison among participating teachers' preferences on handwriting types with capital letters according to gender

variable, as a result of chi-square test it is seen that there is a significant difference only among the letters C, Ç, U and V. The chi-square test applied reveals that female teachers prefer main italic handwriting within the first grade literacy teaching of letters C and Ç more than male teachers. The same also reveals that female teachers prefer main vertical handwriting within the first grade literacy teaching of letters U and Y more than male teachers.

Comparison among participating teachers' preferences on handwriting types with lower letters according to gender variable

Distribution regarding the comparison among participating teachers' preferences on handwriting types with lower letters according to gender variable is provided in the Table 8. In this section only data based on letters showed significant difference at the level of $p < 0,05$ was also included in the table and evaluated.

When analyzing Table 7 prepared for the distribution regarding the comparison among participating teachers' preferences on handwriting

types with lower letters according to gender variable, as a result of chi-square test it is seen that there is a significant difference only among the letters e, ğ and k. The chi-square test applied reveals that female teachers prefer italic handwriting within the first grade literacy teaching of lower letters e, more than male teachers. The same also reveals that female teachers prefer vertical handwriting within the first grade literacy teaching of lower letters ğ and k more than male teachers.

Conclusion

While first grade form-teachers drew analogy mostly with capital letters (E, H, J, O, Y) of vertical handwriting type and they drew analogy mostly with capital letters (C, E, M) of italic handwriting type. While first grade form-teachers mostly drew analogy with lower letters (c, h, l, m, o, s) of vertical handwriting type, they mostly drew analogy with lower letters (c, ç, l, o) of italic handwriting type.

The research revealed that form-teachers rather draw analogy with all capital and lower letters of

Table 5. The three objects and lower letters between which analogy is mostly drawn.

Ver.H.	1 st object (f)	2 nd object (f)	3 rd object (f)	lt.H..	1 st object (f)	2 nd object (f)	3 rd object (f)
a	Half apple (9)	Spectacle glass (7)	Apple (6)	A	Ring with gem (2)	Cave entrance (1)	Pacifier handle (1)
b	Broken glasses (25)	Drumstick (16)	Spoon (8)	b	Wheelchair (4)	Weapon (2)	Whistle (1)
c	Moon, crescent (86)	Bitten bagel (2)	Hook (3)	c	Moon, crescent (24)	Glass handle (7)	Ear (4)
ç	Hooked crescent, moon(21)	Dotted moon(11)	Hook (7)	ç	Hook (5)	The moon with tail (3)	Hooked crescent(2)
d	Drumstick (14)	Saz (stringed musical instrument)(12)	Glasses with one lens (10)	d	Drumstick (3)	Saz (3)	Spoon (2)
e	Laughing man(12)	Snail(6)	Fish (5)	e	Baby buggy (4)	Fish (4)	Telephone wire (1)
f	Pipe wrench (30)	Walkingstick (16)	Tap(15)	f	Pillar(3)	Ballerina(2)	Walkingstick (2)
g	Nine(22)	Reverse of number six (2)	Safety pin (1)	g	"a" with tail(2)	Drumstick (1)	Rattle (1)
ğ	Roofed nine (3)	Reverse of number six (2)	Hatted hook (1)	ğ	Hatted "a"(2)	Helicopter (1)	Drumstick (1)
h	Chair (105)	Reverse of letter "y" (5)	Fork(2)	h	Bent chair (12)	Reverse torch (2)	Armchair (2)
i	Stick (43)	Rod (12)	Short pencil(10)	i	Umbrella handle (6)	Small stick (4)	Candle(3)
i	Dotted stick (18)	Needle (11)	Candle(8)	i	Umbrella handle (6)	Candle(5)	Dotted stick (3)
j	Umbrella handle (27)	Walking stick (23)	Hook (4)	j	Pistol(3)	Golf club(2)	Earring(1)
k	Ironing board(7)	Scissors (5)	Butterfly (5)	k	Ribbon (3)	Weapon (3)	"R" with handle(2)
l	Stick (72)	Pillar(9)	Pencil (9)	l	Walkingstick (14)	Hook(4)	Ladle (4)
m	Mountain (23)	Flying bird (15)	Bridge (12)	m	Mountain chain (9)	Bird (5)	Elephant(4)
n	Tunnel entrance (27)	Reverse glass (23)	Stool(16)	n	Bridge (3)	Mountain chain (3)	Mouse(2)
o	Bagel(48)	Ball(28)	Circle (19)	o	Marble(8)	Baby face(4)	Small bagel (3)

Table 5. Contd.

ö	Dotted (with sesame) small bagel (25)	Small ladybird (12)	Dotted wheel (7)	ö	Dotted bagel (3)	Ladybird (2)	Dotted girl head (3)
p	Broken Glasses (11)	Knob (10)	Topitop(6)	p	Knob (9)	Reverse of saz (3)	Flag (2)
r	Walkingstick (28)	Pruning hook, sickle(10)	Hammer(5)	r	Gooseneck (5)	Hook (4)	Fishing line (2)
s	Snake(89)	Worm(6)	Fire escape(5)	s	Duck (9)	Racking armchair (6)	Snake(3)
ş	Snake(45)	Currency symbol, dollar (14)	Scarf (2)	ş	Duck with open feet (3)	Bell (3)	Anchor (2)
t	Telephone pole(21)	Sword(21)	Plus (11)	t	Umbrella handle (6)	Human with open arms (6)	Hook(3)
u	Glass (75)	Horseshoe (8)	Magnet (7)	u	Glass (16)	Coffee cup (3)	Magnet (3)
ü	Dotted glass (20)	Coffee cup in which sugar is put (2)	Small magnet (2)	ü	Dotted cup (5)	Missile (2)	Coffee cup (1)
v	Vase(14)	Bucket (14)	Valley(9)	v	Wire(1)	Heart (1)	Funnel(1)
y	Catapult(31)	Tree(6)	Fork(5)	y	Mug (3)	Bottle (2)	Torch (1)
z	Zig zag(11)	Ladder (8)	Sand glass(8)	z	Swan(2)	Nippers tip (1)	Spring

The reason hereof can be explained that letters of vertical handwriting type are more symmetric in comparison to letters of italic handwriting type and are more inclined to be symbolized and concreted.

While form-teachers rather drew analogy between letter B and “glasses”; letter E and “comb”; letter H and “ladder”; letter J and “umbrella handle”; letter S and “snake” and; letter Y and “catapult” for the capital letters of vertical handwriting type; they rather drew analogy between C and “moon, crescent”; letter E and “reverse of number 3”; letter M and “mountain chain”; letter U and “mug”; for the capital letters of italic handwriting type. While form-teachers draw analogy rather between letter b and “glasses with broken lens”; letter f and “pipe wrench”; letter h and “chair”; letter l and “stick”; letter n and “tunnel entrance”; letter s and “little snake” and; letter u and “glass” for the lower letters of vertical handwriting type; they rather drew analogy between letter c and “moon, crescent”; letter h and “bent chair”; letter l and

“walkingstick”; letter p and “knob”; and letter s and “duck” for the lower letters of italic handwriting type.

It has been revealed that form-teachers are willing to prefer basic vertical letters for all the letters except for capital letters C, Ç, E, M and N within the first grade literacy teaching process and they also prefer basic vertical letters for all the letters except for lower letters c, ç, e, and u within the first grade literacy teaching process. Conducting the first grade literacy teaching process via italic handwriting strains form-teachers within the first grade literacy teaching process, as for form-teachers, the aptest handwriting type based on the analogy of letters is vertical handwriting type within the first grade literacy teaching. The reason hereof can be explained that letters of vertical handwriting type are more symmetric in comparison to letters of italic handwriting type and are more inclined to be concreted.

It is considered that female teachers rather prefer italic letters to teach the letters “C” and “Ç” and main vertical

Table 6. Participating teachers' preference on handwritings according to letters.

Capital letter	Vertical handwriting		Italic handwriting		Lower letter	Vertical handwriting		Italic handwriting	
	f	%	f	%		f	%	f	%
A	90	70.9	37	29.1	a	84	67.7	40	32.3
B	87	69.0	39	31.0	b	104	83.2	21	16.8
C	40	31.5	87	68.5	c.	51	40.8	74	59.2
Ç	39	32.0	83	68.0	ç	54	43.2	71	56.8
D	86	69.9	37	30.1	d	80	64.5	44	35.5
E	36	28.6	90	71.4	e	32	25.8	92	74.2
F	82	67.2	40	32.8	f	84	68.3	39	31.7
G	70	56.9	53	43.1	g	77	63.1	45	36.9
Ğ	71	57.3	53	42.7	ğ	79	65.3	42	34.7
H	96	76.2	30	23.8	h	85	69.1	38	30.9
I.	95	76.6	29	23.4	ı	85	68.5	39	31.5
İ	90	72.6	34	27.4	i	83	68.0	39	32.0
J	81	65.9	42	34.1	j	87	71.3	35	28.7
K	90	72.0	35	28.0	k	101	81.5	23	18.5
L	73	58.9	51	41.1	l	78	62.4	47	37.6
M	50	40.3	74	59.7	m	69	56.6	53	43.4
N	52	43.7	67	56.3	n	73	58.9	51	41.1
O	84	65.6	44	34.4	o	88	69.8	38	30.2
Ö	80	64.5	44	35.5	ö	85	69.7	37	30.3
P	69	56.1	54	43.9	p	95	79.2	25	20.8
R	61	50.4	60	49.6	r	109	89.3	13	10.7
S	111	88.8	14	11.2	s	114	91.9	10	8.1
Ş	115	93.5	8	6.5	ş	112	89.6	13	10.4
T	74	60.7	48	39.3	t	67	54.9	55	45.1
U	64	52.5	58	47.5	u	58	46.4	67	53.6
Ü	63	51.6	59	48.4	ü	63	51.6	59	48.4
V	90	73.2	33	26.8	v	104	83.9	20	16.1
Y	73	59.3	50	40.7	y	66	52.8	59	47.2
Z	81	65.9	42	34.1	z	98	79.7	25	20.3

Table 7. Comparison among participating teachers' preferences on handwriting types with capital letters according to gender variable.

Letter	Male				Female				X ²	p
	Vertical Handwriting		Italic handwriting		Vertical handwriting		Italic handwriting			
	f	%	f	%	f	%	f	%		
C	25	40.3	37	59.7	15	23.1	50	76.9	4.374	0.036*
Ç	24	40.7	35	59.3	15	23.8	48	76.2	3.986	0.046*
U	24	40.7	35	59.3	40	63.5	23	36.5	6.358	0.012*
V	38	64.4	21	35.6	52	81.3	12	18.8	4.436	0.035*

*p < 0.05; df = 1.

Table 8. Comparison among participating teachers' preferences on handwriting types with lower letters according to the gender variable.

Letter	Male				Female				X ²	p
	Vertical handwriting		Italic handwriting		Vertical handwriting		Italic handwriting			
	f	%	f	%	f	%	f	%		
e	21	35.0	39	65.0	11	17.2	53	82.8	5.132	0.023*
ğ	33	55.9	26	44.1	46	74.2	16	25.8	4.449	0.038*
k	43	71.7	17	28.3	58	90.6	6	9.4	7.367	0.010*

*p < 0.05; df = 1.

handwriting type to teach letters “U” and “Y” within the first grade literacy teaching process in comparison with male teachers. As to lower letters, female teachers rather prefer to teach letter “c” in the first grade literacy teaching process, and vertical handwriting type to teach letters “ğ” and “k” in comparison with male teachers.

Vertical handwriting type of letters should be taught to students in the teaching process of each letter for the first grade literacy teaching. Thereby, students see and learn both types of handwriting with letters. Also, form-teachers utilize letter analogies in the teaching process of each letters within the first grade literacy teaching. It affects memorability positively. Letters analogies can be utilized to prepare course books and materials of first grade literacy.

Researches can be carried out on which handwriting type can be more productive in the first grade literacy teaching. Researches on clear and legible writing according to handwriting types can be conducted. Like this research to be conducted on analogy of letters, different researches based on analogy of voices in the first grade literacy teaching can be done.

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