RESEARCH Open Access

Integrating field-trip activities with other activities in the preschool curriculum: its effects on the preschoolers' social–emotional skills

Emine Kızıltaş¹ and Ramazan Sak^{2*}

*Correspondence: ramazansak06@gmail.com; ramazansak@yyu.edu.tr ² Faculty of Education, Early Childhood Education, Van Yüzüncü Yıl University, Room: A-16, 65080 Van, Turkey Full list of author information is available at the end of the article

Abstract

This study used a static-group pretest–posttest design to investigate how the social–emotional skill development of 36 Turkish children aged 48–66 months was affected by the integration of field-trip activities with other activities in their preschool curriculum. It was carried out in two preschool institutions in Ağrı Provincial Directorate for National Education over 12 weeks during the 2015–2016 school year. The experimental group (n=18) was taken on field trips tailored to activities in the existing preschool curriculum, while for the control group (n=18), no such interventions were made. The Preschool Social Skill Evaluation Scale—Teacher Form and the Emotional Skill Evaluation Test were used to gather data, and one-way analysis of covariance and paired-samples t-tests was used for data analysis. The pretest scores of the experimental and control groups were not significantly different, whereas their posttest scores indicated a significant positive effect of field-trip activities on the social–emotional skills of children in the experimental group. A follow-up test administered 12 weeks after the posttest found that these positive effects persisted.

Keywords: Social–emotional skills, Field trips, Integrated activities, Preschool education, Preschool curriculum

Background

Preschool experiences help a child to discover his own skills, become aware of his responsibilities, develop self-confidence, self-regulate, become more self-sufficient, improve his self-esteem and attention skills, and develop positive attitudes toward school and learning (Burlacu 2013; see also Demirel 2012). It is therefore important that preschool educational programs be designed to support all developmental domains and to effectively foster such knowledge, skills and attitudes (Senemoğlu 1994). Although the cognitive-, motor-, language- and social–emotional dimensions of development are all distinct, there are reciprocal relationships between and among them (Varış 1996).

The skills that children acquire via their social—emotional experiences are important for their development of positive emotions toward themselves, others and the world in general. Emotionally healthy children establish positive relationships with both adults and their peers more easily (Trawick-Swith 2013), and parents therefore expect preschool institutions to support their children's social—emotional development (Sahin



et al. 2013). Social—emotional development includes listening, speaking, complimenting, helping, asking for help, persuading others, defining and expressing feelings, asking for permission, sharing, defending rights, decision-making, greeting, thanking, recognizing problems and finding their solutions, and initiating and maintaining positive social relationships (Csoti 2009).

In psychoanalytic terms, social development occurs in stages (Çetin et al. 2002). According to Freud, human personality is formed during the first 5 years of life, and early childhood experiences therefore profoundly affect adulthood (Hindman and Morrison 2012). Erikson's psychosocial development theory additionally holds that one's early-years environment can have similarly major effects. Emphasizing learning by doing/experiencing, Erikson found that children aged three to six learned about the outside world through games, and that it was through games that learning became permanent (Günindi 2013; San-Bayhan and Artan 2009; Senemoğlu 2012).

Bronfenbrenner has shown how the interaction between child and environment affects the child's behavior both directly and indirectly (Gülay and Akman 2009). Vygotsky (1998) defined the social aspect of development as a "unique relationship, a social reality between the child and reality, which basically surrounds the child" (cited in Bodrova and Leong 2010). As children grow, their expectations of society change along with their behaviors; and serious mistakes about their developmental levels can be made, if their learning ignores or neglects social expectations (Bodrova and Leong 2010). Bowlby (1969) highlighted that children's attachment styles are an important determinant of their future as well as current social relations: with children who are safely attached developing relationships based on trust and intimacy, and positive perceptions of themselves and others. Unsafely attached children, on the other hand, are anxious, insecure, strict in their interactions, and less able to solve their social problems (Gülay and Akman 2009).

According to Bandura (1986), children learn by observing, imitating and modeling the behaviors of others. Children's behavior and the environment interact with each other, and these interactions determine further behaviors. Behavior may change the environment, and vice versa, but such effects are not uniform or predictable (cited in Senemoğlu 2012). Children are selective about the behavior they will imitate, with such choices being impacted by individual personalities, past experiences, relationships to the potential models, and other circumstances (Thompson and Dahling 2012). For this reason, it is important that teachers create educational environments that allow children to make their own plans, give feedback to them and monitor and organize themselves (Senemoğlu 2012).

For Dewey (2001), humans learn by doing and living, and educational activities should suit children's interests, abilities, natural characteristics and individual differences. He further emphasized that children should never be forced into a passive, rote-learning-based education system; that education's emphasis should be on application rather than theory; that information should never be presented as uncontestable; and that children should be given opportunities to discover and think. Piaget (2000) concurred that children are not passive receptors of the world, and emphasized that they learn only through participation in meaningful activities. For this reason, he argued, experiential learning activities should direct children toward active research that allows them to construct

their own concepts; while social interaction during learning should also be encouraged, as it creates opportunities to learn cultural concepts from a range of different perspectives. Experiential learning should combine experience, perception, cognition and behavior, and allow the child to learn from his own experiences and evaluate his learning outcomes accurately (Loo 2004).

Page 3 of 17

Field trips, which aim to meet children's needs for direct and meaningful learning through research, problem-solving and on-the-spot observation (Taylor et al. 1997), have been found to support permanent, positive changes in their knowledge, skills and attitudes (Bozdoğan 2012; Krahenbuhl 2014; Smith-Walters et al. 2014). Such trips are among the most effective means of providing children with opportunities to learn experientially about the natural environment (Krahenbuhl 2014; Taylor, Morris and Cordeau-Young 1997) and of magnifying the benefits of classroom education, particularly about concepts (Ministry of National Education-MoNE 2013). Field trips are important for all developmental domains, including social-emotional development, and if carefully prepared, can provide rich experiences for children (Martin and Sewers 2010; Saul 1993; Seefeldt 1993; Singal and Swann 2011; Taylor et al. 1997). Nevertheless, a survey conducted by Koc and Sak (2017) revealed that 59% of Turkish preschool teachers never engaged in field-trip activities. Nor is there any evidence to suggest that field trips should be restricted to science activities (see Rudmann 1994), or that their benefits would not also be felt in the spheres of art, drama, music, motion, play, mathematics, and literacy preparation.

The importance of interaction with others to children's development has already been discussed, and the literature further indicates that their attachment styles, problem behaviors, peer relationships, parent—child relationships, and self-perceptions are all related to social skills (Ayyıldız 2011; Dereli 2008; Gülay 2008; Günindi 2010; Kuru-Turaşlı 2006; Özdemir-Topaloğlu 2013; Seven 2006). Despite the innately interactive and social aspect of field trips, prior studies examining the effects of various education programs on children's social skills, however, have largely been limited to in-class settings (Ayyıldız 2011; Dereli 2008; Gülay 2008; Günindi 2010; Kuru-Turaşlı 2006; Neslitürk 2013; Özbey 2009; Özdemir-Topaloğlu 2013; Öztürk-Samur 2011). Moreover, most such studies have focused on either social or emotional skills, rather than both these skills acting in combination (Ceylan 2009; Eraslan-Çapan 2006; Kuru-Turaşlı 2006), despite the fact that the preschool curriculum itself regards gains in social and emotional development as occurring in tandem.

To the best of our knowledge, there have been no prior Turkish or international studies of the social—emotional impact of integrating field-trip activities with preschool education programs. The present research therefore aims to fill this gap in the literature.

Research purpose

Based on the literature review presented above, it can be argued that children do not transfer what they have learned at school into their lives outside of school if they cannot easily connect the former to the latter. Behaviors acquired by children in the classroom may lack meaning for them (Kızıltaş and Sak 2016). It was found that field trips helped the children gain life experiences and foster their social—emotional development. For this reason, the purpose of this research is to integrate field-trip activities into a

preschool education program for children aged 48–66 months, and examine such activities' effects on their development of social–emotional skills.

Methods

Research design

This quantitative research adopted a static-group pretest—posttest design. In the social sciences and especially in studies of education, it is very difficult to conduct real experimental studies that require individual participants to be gain randomly assigned to groups. This model therefore allows preexisting groups to be assigned at random (heads or tails) as either an experimental group or a control group (Kaptan 1998). The present study selected two classrooms—one from each of two separate preschool institutions in Ağrı Province, Turkey—and randomly designated one of them as the experimental group, and the other as the control group.

Participants

In this study, preschool education covers 37-66-month-old children in Turkey (MoNE 2012). This research was conducted over a 12-week period within the 2015-2016 academic year. All of the participants were aged between 48 and 66 months at the time the experiment began. The control group and the experimental group were the same size, each comprising 18 children. The experimental group consisted of 10 girls (55.6%) and eight boys (44.4%), and the control group was gender-balanced. Five of the children in the experimental group (27.8%) were 4 years old, and the remaining 13 (72.2%) 5 years old, whereas in the control group, only two (11.1%) were aged four. Three-fifths (61.1%; n=11) of the experimental group had been in preschool education for 1 year, and the remainder of the group, for 2 years; the control group had relatively less experience of education, with nearly nine-tenths (88.9%; n = 16) of its members having 1 year of preschool and only two having more than that. Eight (44.4%) of the members of the experimental group were the eldest children in their respective families, with another eight (44.4%) being the second child and two (11.1%) the third child. In the control group, 12 (66.7%) were the eldest child, three (16.7%) the second child, one (5.6%) the third child, and two the fourth child or below. Five (27.8%) of the children in the experimental group had one sibling, nine (50%) had two, and two (11.1%) had three, while another two (11.1%) had no siblings. In the control group, 11 children (61.1%) had one sibling, four (22.2%) had two, two (11.1%) had three, and one (5.6%) had none. According to these results, it can be said that this personal background data had generally similar characteristics across the experimental and control groups.

Data-collection tools

The data-collection tools used in this research were the Pre-school Social Skill Assessment Scale—Teacher Form (PSSAS-TF; Ömeroğlu et al. 2014); the Emotional Skills Assessment Test (ESAT; Schultz and Izard 1998); and a Personal Information Form developed by the researchers that covered the participants' gender, age, number of siblings, position in the sequence of siblings, and time spent in preschool education.

The PSSAS-TF was developed to assess the social skills of preschool children aged three to five. Its 49 items cover four dimensions: baseline skills (12 items),

academic-support skills (12 items), friendship skills (13 items), and emotion-management skills (12 items). Responses to all questions are given via a five-point Likert-type scale, where 1 = "almost never good", 2 = "rarely good", 3 = "sometimes good and sometimes not", 4 = "often good" and 5 = "always good". This instrument was designed on the basis of expert opinion, and the standardized coefficients for its four-factor structure, as revealed by confirmatory factor analysis (CFA), were all above .45. The moderate to high level of correlation between the factors indicates that the four basic skills it assesses, defined as subdimensions of social skills, do not operate independently of each other. The Cronbach's alpha reliability coefficients for the subdimensions were .90 for baseline skills, .90 for academic-support skills, .92 for friendship skills, .92 for emotion-management skills, and .96 overall. It can therefore be said that the instrument is a valid tool for assessing and distinguishing between the social skills of children aged 48–66 months.

The ESAT was developed to assess the four basic emotional states of preschool children, i.e., happy, sad, angry, and frightened. It consists of three 10-item subtests, covering recognizing feelings, understanding emotions and expressing emotions. It was translated into Turkish by Durmusoglu-Saltali et al. (2009), who conducted validity and reliability studies of their version. Factor analysis found values ranging between .35 and .59 for recognizing feelings, .30 and .63 for understanding emotions, and .31 and .68 for expressing emotions. Expert opinion was also sought for the scope validity of the test. Reliability results for the Turkish version of ESAT obtained using the test-split method were .87 for understanding emotions, .82 for recognizing emotions, .78 for expressing emotions, and .79 overall. Analysis of the test items using arithmetic means, standard deviation, total item correlation, item strength and item discrimination scores also supported the reliability of the test; and results of a *t*-test of the significance of the difference between each subtest and the bottom 27% and top 27% of total scores on the test indicated that it was capable of distinguishing between successful and unsuccessful groups.

The present research utilized only two of the ESAT's three dimensions—understanding emotions and expressing emotions—because according to three experts (from early childhood education and research in social sciences), the dimension of recognizing feelings was not appropriate for the participants. When scoring the test, the participants were given one point for each correct answer and zero points for each wrong answer, or for the answer "I don't know". As such, the lowest score that can be received for the understanding emotions subtest is 0, and the highest score, 10; and the lowest and highest possible scores for the expressing emotions subtest are the same (Durmuşoğlu-Saltalı et al. 2009).

Data-collection process

The experiment commenced on October 26, 2015 and ended on January 15, 2016. One of the researchers was included as an observer in the experimental group. In the control group, no alterations were made to the school's existing activities. In the experimental group, field-trip activities were integrated with the existing activities, according to the following steps. First, 18 field-trip activity plans were prepared in support of Turkishlanguage, art, drama, music, motion, play, mathematics, science, and literacy-preparation activities. Each activity plan was reviewed by one specialist in the relevant field of education, six specialists in preschool education and child development, and four

preschool teachers. This review process led to various revisions being made to 12 of the draft plans, and the other six being eliminated.

The necessary permissions were then obtained for the implementation of the 12 finalized activity plans during the 2015-2016 academic year, in accordance with existing regulations to be observed during field trips. Prior to the experiment, two meetings were held with the experimental group's parents, to inform them about the significance of their children's social-emotional development and to inform them about the fieldtrip activities that were planned. All of the parents gave permission for their children to participate in the field trips, and some parents agreed to go on one or more of the field trips themselves. Before the implementation of field-trip activities, all three datacollection instruments were administered to both groups of children as pretests; and in the last week of the intervention, the same assessment tools were applied to both groups again as a posttest to determine the effect of the experimental procedures. In addition, individual parent interviews were conducted by the teacher and the researcher to gauge how active parental participation in the trips had been. Finally, 12 weeks after the end of the intervention, the assessment tools were reapplied a third time, as a follow-up test of the longer-term effects of the field-trip activities on the participants' social-emotional development.

During intervention process, different places were visited. For instance, trips were conducted to a bakery, a university, a place of a shoemaker and a horse farm, etc. The field-trip activity was integrated with the science activity when children visit a bakery. Integrated activity started with a transition activity to catch children's attention and then they were invited to a bakery. When they arrived there, they met people working there and observed the environment. Then, they encouraged asking their questions. After introduction part, children were asked how bread was prepared. Then, they expressed their ideas, observed and also participated in the process actively. Especially children observed what the ingredients were for bread and how these ingredients changed at the end of the process. After the activity, they talked about it.

Data analysis

Analysis of covariance (ANCOVA), which can be defined as the combination of variance analysis and regression analysis, is a powerful technique that can be applied when assumptions are met. When a significant difference between the experimental and control groups was found, ANCOVA was applied, with the pretest controlled as a common variable to ensure statistical control of the dependent variable (Creswell 2012). The variance in the dependent variable caused by the variables defined as external by the researcher in pretest–posttest control-group patterns is controlled statistically by ANCOVA to increase the power of the test (Büyüköztürk 2014). Paired samples *t*-tests are used in experimental and screening studies in which two assessments or scores are obtained (Büyüköztürk 2012), and were therefore used to assess the follow-up test results obtained from the PSSAS-TF and ESAT. All data analysis was performed using SPSS statistical software.

Kızıltaş and Sak *ICEP (2018)12:8* Page 7 of 17

Table 1 Descriptive statistical values for the baseline skills subdimension of the experimental and control groups

Group	N	Mean	Corrected (controlled pretest) mean
Experimental	18	52.61	53.31
Control	18	50.55	49.83

Table 2 Group-based single-factor ANCOVA results for the posttest scores, corrected according to the baseline skills subdimension pretest scores

Source	Sum of squares	df	Mean square	F	р	η²	Significant difference
Baseline skills pretest	316.166	1	316.166	8.047	.008	.196	
Group	103.819	1	103.819	12.642	.014	.557	A > B
Error	1296.556	33	39.290				
Total	97,441.000	36					

A = experimental, B = control

Table 3 Descriptive statistical values for the academic-support skills subdimension of the experimental and control groups

Group	N	Mean	Corrected mean
Experimental	18	54.33	54.50
Control	18	51.27	51.10

Findings

Findings related to the social skills of children in the experimental and control groups Findings related to the baseline skills subdimension

ANCOVA was conducted to determine whether there was a significant difference between the pretest and posttest scores of the experimental and control groups regarding baseline skills (Table 1).

The corrected mean scores of the children in the experimental group were higher than those of the children in the control group. The results of single-factor ANCOVA are shown in Table 2.

When both groups' pretest scores were controlled as covariates, the mean posttest scores for baseline skills (corrected according to pretest results) differed significantly between the experimental and control groups: $F_{(1,33)} = 12.64$, p = 014, $\eta^2 = .55$. A Bonferroni Test determined that the source of this intergroup difference was the significantly higher posttest scores achieved by the experimental group, suggesting that the experimental intervention was effective in improving the participants' baseline skills.

Findings related to the academic-support skills subdimension

ANCOVA was conducted to determine whether there was a significant difference between the pretest and posttest scores of the experimental and control groups in terms of academic-support skills (Table 3).

The corrected mean scores were higher for the experimental group than for the control group. The results of single-factor ANCOVA are presented in Table 4.

Table 4 Group-based single-factor ANCOVA results for the posttest scores, corrected according to the academic-support skills subdimension pretest scores

Source	Sum of squares	df	Mean square	F	р	η²	Significant difference
Academic-support pretest	9.331	1	9.331	4.313	.029	.449	
Group	93.359	1	93.359	7.136	.032	.517	A > B
Error	982.280	33	29.766				
Total	101,459.000	36					

Table 5 Descriptive statistical values for the friendship skills subdimension of the experimental and control groups

Group	N	Mean	Corrected mean
Experimental	18	58.50	58.53
Control	18	57.05	57.02

Table 6 Group-based single-factor ANCOVA results for the posttest scores, corrected according to the friendship skills subdimension pretest scores

Source	Sum of squares	df	Mean square	F	р	η²	Significant difference
Friendship skills pretest	8.275	1	8.275	5.148	.032	.344	
Group	20.360	1	20.360	4.364	.040	.311	A > B
Error	1845.169	33	55.914				
Total	122,050.000	36					

A = experimental, B = control

When the pretest scores of the groups were controlled as covariates, the posttest means for academic-support skills (corrected according to pretest scores) differed significantly between the experimental and control groups: $F_{(1,33)}=7.136$, p=.032, $\eta^2=.51$. Bonferroni testing again established that this resulted from the posttest scores of the experimental group being significantly higher than those of the control group, again supporting the effectiveness of the intervention in terms of improving the participants' academic-support skills.

Findings related to the friendship skills subdimension

ANCOVA was performed to determine whether there was a significant difference between the pretest and posttest scores of the experimental and control groups in the area of friendship skills. The corrected mean scores of the experimental group were higher than those of the control group. The results of the single-factor ANCOVA are presented in Tables 5 and 6.

When the pretest scores of both groups were controlled as covariates, the posttest means for the friendship-skills dimension (corrected according to pretest scores) differed significantly between the experimental and control groups: $F_{(1,33)}=4.36$, p=.040, $\eta^2=.31$. Bonferroni testing found that the posttest scores of the experimental group were significantly higher than those of the control group, suggesting that the intervention was effective in improving the participants' friendship skills.

Kızıltaş and Sak *ICEP (2018)12:8* Page 9 of 17

Table 7 Descriptive statistical values for the emotion-management skills subdimension of the experimental and control groups

Group	N	Mean	Corrected mean
Experimental	18	51.22	50.70
Control	18	47.05	47.57

Table 8 Group-based single-factor ANCOVA results for the posttest scores, corrected according to the emotion-management skills subdimension pretest scores

Source	Sum of squares	df	Mean square	F	р	η²	Significant difference
Emotions man. pretest	54.749	1	54.749	8.388	.047	.190	
Group	75.121	1	75.121	5.905	.017	.255	A > B
Error	1301.306	33	39.434				
Total	88,439.000	36					

A = experimental, B = control

Table 9 Descriptive statistical values for the overall social-skills scores of the experimental and control groups

Group	N	Mean	Corrected mean
Experimental	18	216.66	217.53
Control	18	205.94	205.07

Findings related to the emotion-management skills subdimension

ANCOVA was performed to determine whether there was a significant difference between the pretest and posttest scores of the experimental and control groups in terms of emotion-management skills (Table 7).

The experimental group again had higher corrected mean scores than the control group did. The results of this single-factor ANCOVA are shown in Table 8.

When the pretest scores of both groups were controlled as covariates, the means of the emotion-management skills posttest scores (corrected according to pretest scores) differed significantly between the experimental and control groups: $F_{(1,33)}=5.90$, p=.017, $\eta^2=.25$. A Bonferroni test to determine the source of this intergroup difference found that the posttest scores of the experimental group were significantly higher than those of the control group, indicating that the intervention was effective in improving the children's emotion-management skills.

Findings related to overall scores for social skills

ANCOVA was performed to determine whether there was a significant difference between the overall pretest and posttest scores of the experimental and control groups.

The corrected mean scores for the experimental group were higher than those of the control group, as shown in Tables 9 and 10.

When the pretest scores of both groups were controlled as covariates, the means of the overall posttest scores (corrected according to pretest scores) differed significantly between the experimental and control groups: $F_{(1,33)} = 9.32$, p = .037, $\eta^2 = .66$. Bonferroni

Table 10 Group-based single-factor ANCOVA results for the overall posttest scores, corrected according to overall pretest scores

Source	Sum of squares	df	Mean square	F	р	η²	Significant difference
Social-skills total pretest	279.816	1	279.816	7.511	.020	.451	
Group	1273.133	1	1273.133	9.325	.037	.664	A > B
Error	18,069.128	33	547.549				
Total	1,626,785.000	36					

Table 11 *T*-test results for the experimental group's mean scores on the social-skills subtest of the posttest and follow-up test

Subdimensions	Measurement	χ	SD	t	р
Baseline skills	Posttest	52.6111	4.11795	.172	.865
	Follow-up test	52.3333	5.47723		
Academic-support skills	Posttest	54.3333	3.58100	1.86	.070
	Follow-up test	51.6667	4.88696		
Friendship skills	Posttest	58.5000	5.51202	.660	.514
	Follow-up test	57.3333	5.08747		
Emotion-management skills	Posttest	51.2222	4.13814	.378	.708
	Follow-up test	50.6111	5.46797		
Social-skills total	Posttest	216.6667	14.89177	.822	.417
	Follow-up test	211.9444	19.30398		

testing for the source of this difference established that the overall posttest scores of the experimental group were significantly higher than those of the control group, indicating that the field-trip activities engaged in by the members of the experimental group were effective at improving their social skills.

Comparison of the overall posttest and follow-up test results of the experimental group

To test whether the overall social-skills advantage implied by the experimental group's overall posttest scores was long lasting, the results of the follow-up test administered to the experimental group 12 weeks after the end of the intervention were compared against the same group's posttest scores, using dependent-samples *t*-testing. The findings are presented in Table 11.

The table shows that between the posttest and the follow-up test, there was no significant change in any of the four social-skills components, i.e., baseline skills (t_{17} =.172, p>.05), academic-support skills (t_{17} =1.86, p>.05), friendship skills (t_{17} =.660, p>.05) ,or emotion-management skills (t_{17} =.378, p>.05). Nor was there any significant difference between the two tests in terms of the social-skills total score (t_{17} =.822, p>.05). These findings indicate that the effects of the experimental intervention continued after it ended, for an additional length of time equal to the length of the intervention itself.

Table 12 Descriptive statistical values for the understanding emotions subtest scores of the experimental and control groups

Group	N	Mean	Corrected mean
Experimental	18	7.33	7.29
Control	18	6.66	6.75

Table 13 Group-based single-factor ANCOVA results for the overall posttest scores, corrected according to the understanding emotions subtest results

Source	Sum of squares	df	Mean square	F	р	η²	Significant difference
Und. emotions pretest	30.073	1	30.073	19.112	.000	.367	
Group	2.220	1	2.220	11.411	.023	.401	A > B
Error	51.927	33	1.574				
Total	1850.000	36					

Table 14 Descriptive statistical values for the expressing emotions subtest scores of the experimental and control groups

Group	N	Mean	Corrected mean		
Experimental	18	7.38	7.34		
Control	18	5.44	5.48		

Findings related to the understanding emotions subtest

The corrected mean scores of the posttest's understanding emotions subtest were higher for the children in the experimental group. Single-factor ANCOVA results are shown in Tables 12 and 13.

When the pretest scores of both groups were controlled as covariates, the mean understanding emotions subtest scores on the posttest (corrected according to pretest scores) differed significantly between the experimental and control groups: $F_{(1,33)}=11.41$, p=.023, $\eta^2=.40$. Bonferroni testing found that the posttest scores of the experimental group were significantly higher than those of the control group, indicating that the intervention was effective in improving the participants' ability to understand emotions.

Findings related to the expressing emotions subtest

ANCOVA was performed to determine whether there was a significant difference between the pretest and posttest performance of the experimental and control groups on the understanding emotions subscale (Table 14).

The corrected mean scores were higher for the experimental group, and the results of single-factor ANCOVA are presented in Table 15.

When the pretest scores of both groups were controlled as covariates, the mean scores on the expressing emotions subtest of the posttest (corrected according to pretest scores) differed significantly between the experimental and control groups: $F_{(1,33)} = 9.78$, p = .00, $\eta^2 = .31$. Bonferroni testing determined that the posttest scores of the experimental group on this subtest were significantly higher than those of the control group,

Table 15 Group-based single-factor ANCOVA results for the overall posttest scores, corrected according to the expressing emotions subtest results

Source	Sum of squares	df	Mean square	F	р	η^2	Significant difference
Exp. emotions pretest	33.658	1	33.658	10.572	.003	33.658	
Group	31.152	1	31.152	9.785	.004	31.152	A > B
Error	105.064	33	3.184			105.064	
Total	1655.000	36				1655.000	

Table 16 *T*-test results for the experimental group's mean scores on the emotional evaluation subtest of the posttest and follow-up test

Sub-tests	Measurement	χ	SD	t	р
Understanding emotions	Posttest	7.3333	1.53393	.29	.77
	Follow-up test	7.5000	1.88648		
Expressing emotions	Posttest	7.3889	2.37979	.42	.67
	Follow-up test	7.6667	1.37199		

indicating that the experimental intervention was effective in improving the children's ability to express their emotions.

Comparison of the posttest and follow-up test results related to the experimental group's emotional evaluation subtests

The pretest and posttest results relating to the experimental group's emotional evaluation skills differed significantly. To determine whether the beneficial effects of the field-trip activities were long lasting, a follow-up test was applied to the experimental group 12 weeks after the end of the experiment, and its results compared against the same group's posttest scores using dependent-samples t-testing. The findings are presented in Table 16.

The table indicates that there were no significant differences in the experimental group's emotional evaluation subtest scores between the posttest and follow-up test, either for understanding emotions (t_{34} =.29, p>.05) or for expressing emotions (t_{34} =.42, p>.05). This implies that the positive effect of the 12-week experimental intervention was ongoing, 12 weeks after it ended.

Discussion

Children's learning is a complex and varied process that affects peers, siblings, parents, teachers, caretakers and other individuals (Azmitia and Perlmutter 1989). The field-trip activities undertaken by the experimental group, incorporating a learning process whereby the children shared with their peers, teachers, siblings and parents, were found to have a significant positive effect on their baseline social skills. It can be conjectured that the interactivity of their learning process supported the development of these baseline skills. In a similar experiment conducted by Neslitürk (2013), it was found that the value placed on education by the mothers of 5 and 6 year olds significantly improved their children's general social skills (i.e., communication, cooperation, self-expression,

responsibility, empathy, group work, and self-control). Durualp (2009) found that children who participated in a game-based social-skills training program achieved higher social-skills scores (e.g., exhibiting desirable behaviors and attitudes) than children in a control group who did not participate in the training. Such results tend to support the value of training, as applied in the present research.

The field trips undertaken by the experimental group were also found to have a significant effect on their academic-support skills. Preschool children's experiences of field trips should stimulate their interest, expand their knowledge, entertain them, and add variety to their school activities (Feeney 1994; Hildebrand 1986; Nachbar 1992; Taylor et al. 1997). Such trips should be educational and interactive, and these activities should improve learning (Hofstein and Rosenfeld 1996; Krepel and Durral 1981). In the present research, field-trip activities included visual, auditory, and motion-based activities, enabling children to experience the taste and smell of objects and have adventurous experiences. The educational activities, meanwhile, both supported the children to learn by discovering their surroundings, and provided opportunities for them to engage in real-life practice of knowledge they had gained in class. As such, it can be said that these practices support the development of the academic-support skills of the children in the experimental group.

Prior researchers have suggested that an ideal school field trip should include pre- and posttrip activities (Bitgood 1989; Falk and Dierking 2000; Orion and Hofstein 1994; Rennie and McClafferty 1995; Taylor et al. 1997). During a field trip, children encounter a new environment and have the opportunity to engage in a broader range of activities than they might in the classroom (Woerner 1999). Nundy (1999) found that field trips positively impacted children's collaborative work, leadership qualities, patience, reliability, assertiveness and motivation. Research conducted by the UK's National Foundation for Educational Research also showed that children's participation in field-trip activities improved their self-confidence, self-esteem and teamwork skills (Dillon et al. 2005). Field trips also facilitate communication among children, who often like to talk to each other about the experiences they have had (Dillon et al. 2006). In the present research, before each trip, an interactive learning process made use of picture cards, banners, puppets, costumes, educational toys, poems, stories, songs, finger games and educational games related to the trip. During each trip, an environment was created in which the children could express themselves freely, communicate with the people around them, and establish common areas for sharing with their friends. As well as being encouraged to ask questions during the trips, the children were provided with posttrip opportunities to practice their social skills, such as talking about and reflecting on their experiences, participating in group activities, working with and helping their friends, following rules, and taking responsibility. As such, it is not particularly surprising that the experimental group's friendship skills improved significantly.

The present study's experimental intervention was also found to have a significant effect on the participants' emotional-management skills. When planning field-trip activities, teachers should consider children's fears and phobias, previous experiences, and learning styles (Dillon et al. 2006). Collins (2004) found that successful field trips were associated with positive emotional energy (further defined as interest, success, appreciation, happiness and independence), while unsuccessful ones were associated with

negative emotional energy (disappointment, anger, boredom, indifference, dissatisfaction, and failure). The evocation of positive emotional energy was central to the present research's intervention, and this may have contributed to the finding that the experimental group's emotional-management skills significantly improved, while the control group's did not.

The significant overall improvement in the social-skills scores of the children in the experimental group, which the control group did not share, clearly implies that the integration of field-trip activities with the normal preschool curriculum supported the development of their social skills, probably by exposing them to environments rich in stimuli. As well as expanding children's concepts of the outside world (Feeney 1994; Saul 1993; Taylor et al. 1997), field trips have previously been found to significantly support their social—emotional development (Mitchell 1934, cited in Taylor et al. 1997). Social—emotional skills ensure lifelong positive adaptation (Rubin et al. 2007), mental health (Luecken et al. 2013), and academic achievement (Ladd et al. 1999). Research on the effectiveness of various in-class educational programs intended to improve such skills among pre-primary has generally found then to be effective (Domitrovich et al. 2007; Özbey 2009; Özdemir-Topaloğlu 2013; Öztürk-Samur 2011)—in some cases, with a collateral benefit of reducing problem behaviors. It is proposed here that the integration of field trips into the preschool curriculum could be as effective as these classroom-based approaches, at least among children aged 48–66 months.

The experimental group's ability to understand and express emotions was also improved by their field-trip experiences. It is believed that, during such trips, children establish better friendships with their peers, as well as informal communication links with teachers that allow them to express their emotions to their teachers more easily (Buchanan 1992, cited in Martin and Sewers 2010). Similar research conducted by Ulutaş (2005) revealed that an emotional-intelligence training program affected children's ability to recognize, understand, and grasp emotions, and that these new assumptions about emotions affected their decisions. Kapsch (2006) found that preschoolers and first graders who participated in drama training were more successful than others at expressing emotions; and Durmuşuğlu-Saltalı (2010) found that emotional education supported preschoolers' ability to understand and express emotions. The present research findings echo those of these previous studies, while confirming that field-trip activities can serve the same purpose as the above-mentioned classroom-based efforts.

Lastly, the present research suggests that the social—emotional benefits of integrating field trips into preschool curricula may be long term, or even permanent. This finding echoes those of numerous prior studies in the field (Ceylan 2009; Dereli 2008; Durmuşoğlu-Saltalı 2010; Durualp 2009; Günindi 2010; Neslitürk 2013; Özbey 2009; Özdemir-Topaloğlu 2013; Öztürk-Samur 2011).

Conclusion and recommendations

The results discussed above clearly indicate that, if carefully planned and executed with extensive parental involvement, the integration of field trips into preschool education can strongly support the development of social—emotional skills among children aged 48–66 months, even long after such interventions have ceased. As such, more should be done to educate preschool teachers about the potential that exists for supporting the

social—emotional development of their students through out-of-class activities. Such activities need not be elaborate or expensive, but can take place in the immediate environment of their schools or even inside school buildings.

Future research should investigate the effects of field trips on the learning styles, scientific thinking processes, and cognitive, motor, language, and self-care skills of preschool children. Problems experienced by teachers during preschool field trips should also be examined, along with the opinions of senior preschool administrators.

Authors' contributions

EK participated in the design of the study, application of field-trip activities, and performed the collection of data and statistical analysis. RS participated in its design and coordination, and helped to draft the manuscript. Also, both researchers contributed to the Discussion section of the study together. Both authors read and approved the final manuscript.

Author details

¹ Vocational School of Health Services, Child Development Program, Ağrı İbrahim Çeçen University, Ağrı, Turkey. ² Faculty of Education, Early Childhood Education, Van Yüzüncü Yıl University, Room: A-16, 65080 Van, Turkey.

Acknowledgements

This research was carried out by the Yüzüncü Yıl University's Coordination Unit for Scientific Research Projects, within the scope of Project No. 2015-EBE-D344. The authors would like to express their gratitude for the unit's contributions.

This article was extracted from the first author's doctoral dissertation.

Competing interests

The authors declare that they have no competing interests.

Ethics approval and consent to participate

Not applicable.

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Received: 17 April 2017 Accepted: 21 April 2018

Published online: 02 May 2018

References

Ayyıldız, T. (2011). 6 yaş (60–72 ay) çocuklarda sosyal beceri geliştirerek şiddeti önleme programının etkisi [The effect of violence prevention program by developing social skill on 6 age (60–72 months) old children]. Unpublished doctoral dissertation, Marmara University, İstanbul.

Azmitia, M., & Perlmutter, M. (1989). Social influences on children's cognition: State of the art and future directions. Advances in Child Development and Behavior, 22, 89–144.

Bandura, A. (1986). Social foundations of thought and action: a social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall. Bitgood, S. (1989). School field trips: An overview. Visitor Behavior, 4(2), 3–6.

Bodrova, E., & Leong, D. J. (2010). Tools of the mind the Vygotskian to early childhood education. In G. Haktanır (Ed.), *Trans*. Ankara: Anı Yayıncılık.

Bowlby, J. (1969). Attachment and loss: Attachment. New York: Basic Books.

Bozdoğan, A. E. (2012). The practice of prospective science teachers regarding the planning of education based trips: Evaluation of six different field trips. *Educational Sciences*, 12(2), 1062–1069.

Buchanan, H. E. (1992). ESL field trips: Maximizing the experiences both in and out of the classroom. Unpublished master's thesis. Brattleboro: VT: School for International Training. (ERIC Document Reproduction Service No. ED 352838).

Burlacu, F. (2013). The importance of pre-school education in child development. *Euromentor Journal, 4*(2), 153–165. Büyüköztürk, Ş. (2012). *Sosyal bilimler için veri analizi el kitabı [Data analysis handbook for social sciences].* Ankara: Pegem Yayıncılık

Büyüköztürk, Ş. (2014). Deneysel desenler öntest-sontest kontrol grubu desen ve veri analizi [Experimental designs pre-test and post-test control group pattern and data analysis]. Ankara: Pegem Yayıncılık.

Çetin, F., Bilbay, A. A., & Kaymak, D. A. (2002). Araştırmadan uygulamaya çocuklarda sosyal beceriler [Social skills in children from research to practice]. İstanbul: Epsilon Yayıncılık.

Ceylan, Ş. (2009). Vineland sosyal-duygusal erken çocukluk ölçeğinin geçerlik-güvenirlik çalışması ve okul öncesi eğitim kurumuna devam eden beş yaş çocuklarının sosyal-duygusal davranışlarına yaratıcı drama eğitiminin etkisinin incelenmesi [Validity-reliability study of vineland social-emotional early childhood scale and examination of effects of creative drama education on social-emotional behavior of 5-year old pre-school children attending preschool educational institutions]. Unpublished doctoral dissertation, Gazi University, Ankara.

Collins, R. (2004). Interaction ritual chains. Princeton: Princeton University Press.

- Creswell, J. W. (2012). Educational research: Planning, conducting, and evaluating quantitative and qualitative research.

 Boston: Pearson Education Inc.
- Csoti, M. (2009). Developing children's social, emotional and behavioural skill. New York: Cromwell Press.
- Demirel, Ö. (2012). Eğitimde program geliştirme [Curriculum development in education]. Ankara: Pegem A Yayıncılık.
- Dereli, E. (2008). Çocuklar için sosyal beceri eğitim programının 6 yaş çocukların sosyal problem çözme becerilerine etkisi [The effect of the programme of child social skills training on the skill of 6-year-old children's social problem solving]. Unpublished doctoral dissertation, Selçuk University, Konya.
- Dewey, J. (2001). Democracy and education. State College: The Pennsylvania State University, A Penn State Electronic Classics Series Publication.
- Dillon, J., Morris, M., O'Donnell, L., Reid, A., Rickinson, M., & Scott, W. (2005). Engaging and learning with the outdoors—the final report of the outdoor classroom in a rural context action research project. Slough: National Foundation for Education Research.
- Dillon, J., Rickinson, M., Teamey, K., Morris, M., Choi, M. Y., Sanders, D., et al. (2006). The value of outdoor learning: Evidence from research in the UK and elsewhere. *School Science Review*, 87(320), 107–112.
- Domitrovich, C. E., Cortes, R., & Greenberg, M.T. (2007). Improving young children's social and emotional competence: A randomized trial of the preschool "paths" curriculum. *The Journal of Primary Prevention*, 28(2), 67–91.
- Durmuşoğlu-Saltalı, N., Deniz, M. E., Çeliköz, N., & Arı, R. (2009). Adaptation of a test in Turkish about evaluation of the 6 year old children's emotional skills: Validity and reliability study. *Ankara University Journal of Educational Sciences*, 42(1), 403–420.
- Durualp, E. (2009). Anasınıfına devam eden altı yaş çocuklarının sosyal uyum ve becerilerine oyun temelli sosyal beceri eğitiminin etkisinin incelenmesi: Çankırı örneği [A study on the effects of play-based social skills training on social adaptation and skills of 6-year-old preschool children: Sample of Çankiri]. Unpublished doctoral dissertation, Ankara University, Ankara
- Eraslan-Çapan, B. (2006). Çocukların kendilik değerini geliştirmede kendilik değerini geliştirme programı ve sosyal ve duygusal eğitim programının etkililiği [The effectiveness of self-esteem enhancement program and social emotional education program emotional education program in children's self-esteem]. Unpublished doctoral dissertation, Hacettepe University, Ankara.
- Falk, J. H., & Dierking, L. D. (2000). Learning from museums: Visitor experiences and the making of meaning. New York: Altamira Press.
- Feeney, L. (1994). Today's teacher trips: Fabulous field trips. Early Childhood Today, 8, 8.
- Gülay, H. (2008). 5–6 yaş çocuklarına yönelik akran ilişkileri ölçeklerinin geçerlik güvenirlik çalışmaları ve akran ilişkilerinin çeşitli değişkenler açısından incelenmesi [Standardization of a scale for measuring peer relations among 5–6 years old children and studying the relations between some familial variables and peer relations of children at this age]. Unpublished doctoral dissertation, Marmara University, İstanbul.
- Gülay, H., & Akman, B. (2009). Okul öncesi dönemde sosyal beceriler [Social skills in preschool period]. Ankara: Pegem Yavıncılık.
- Günindi, Y. (2010). Anasınıfına devam eden altı yaş çocuklarına uygulanan sosyal uyum beceri eğitimi programının çocukların sosyal uyum beceri eğitimi programının çocukların sosyal uyum becerilerinin gelişimine etkisi [Effects of social adaptation skills education program to improve 6 years old kindergarten children's social adaptation skills]. Unpublished doctoral dissertation, Gazi University, Ankara.
- Günindi, Y. (2013). An evaluation of social adaption skills of children with and without preschool education background based on their mothers' views. *Us China Education Review B*, *3*(2), 80–90.
- Hildebrand, V. (1986). Introduction to early childhood education. NewYork: Macmillan.
- Hindman, A., & Morrison, F. J. (2012). Differential contributions of three parenting dimensions to preschool literacy and social skills in a middle-income sample. *Merrill-Palmer Quarterly*, 58(2), 191–223.
- Hofstein, A., & Rosenfeld, S. (1996). Bridging the gap between formal and informal science learning. *Studies in Science Education*, 28, 87–112.
- Kapsch, L. A. (2006). The effect of dramatic play on children's graphic representation of emotion. Unpublished doctoral dissertation, Georgia State University, Atlanta.
- Kızıltaş, E., & Sak, R. (2016). Okul öncesi eğitimde alan gezisi etkinlikleri [Field trip activities in preschool education]. Bayburt Eğitim Fakültesi Dergisi, 11(2), 536–554.
- Kaptan, S. (1998). Bilimsel araştırma ve istatistik teknikleri [Scientific research and statistical techniques]. Ankara: Tekışık web ofset
- Koç, F., & Sak, R. (2017). Okul öncesi öğretmenlerinin okul öncesi eğitim programındaki etkinliklere yönelik öz-yeterlik inançlarının incelenmesi [Examination of preschool teachers'self-efficacy beliefs related to activities in preschool education program]. *Uludağ Eğitim Fakültesi Dergisi [Uludağ Journal of Education]*, 30 (1), 43–71.
- Krahenbuhl, K. (2014). Collaborative field trips: An opportunity to connect practice with pedagogy. *The Geography Teacher*, 11(1), 17–24. https://doi.org/10.1080/19338341.2013.854264.
- Krepel, W. J., & Durral, C. R. (1981). Field trips: A guideline for planning and conducting educational experiences. Washington, DC: National Science Teachers Association.
- Kuru-Turaşlı, N. (2006). 6 yaş grubu çocuklarda benlik algısını desteklemeye yönelik sosyal-duygusal hazırlık programının etkililiğinin incelenmesi [Investigate the effect of social-emotional readiness program to support the self-concept on 6 years old childrens]. Unpublished doctoral dissertation, Marmara University, İstanbul.
- Ladd, G. W., Birch, S. H., & Buhs, E. S. (1999). Children's social and scholastic lives in kindergarten: Related spheres of influence? Child Development. 70. 1373–1400. https://doi.org/10.1111/1467-8624.00101.
- Loo, R. (2004). Kolb's learning styles and learning preferences: Is there a linkage? *Educational Psychology, 24*(1), 99–108. Luecken, L. L., Roubinov, D. S., & Tanaka, R. (2013). Childhood family environment, social competence, and health across the lifespan. *Journal of Social and Personal Relationships, 30*(2), 171–178. https://doi.org/10.1177/0265407512454272.
- Martin, S. S., & Sewers, R. L. (2010). A field trip planning guide for early childhood classes, preventing school failure. *Alternative Education for Children and Youth, 47*(4), 177–180. https://doi.org/10.1080/10459880309603364.

- MoNE. (2012). 12 yıl zorunlu eğitim: Sorular ve cevaplar [12 year-compulsory education: Questions and answers. http://www.meb.gov.tr/duyurular/duyurular2012/12yil_soru_cevaplar.pdf.
- MoNE. (2013). Okul öncesi eğitim programı [Preschool education program]. Ankara: Milli Eğitim Yayınları.
- Mitchell, L. (1934). Young geographer. New York: Bank Street College.
- Nachbar, R. (1992). What do grown-ups do all day? The world of work Young Children, 47(3), 6–12.
- Neslitürk, S. (2013). Anne değerler eğitimi programının 5–6 yaş çocuklarının sosyal beceri düzeyine etkisi [The effect of mother values program to the social skill levels of the 5–6 years old children]. Unpublished doctoral dissertation, Selçuk University, Konya.
- Nundy, S. (1999). The field work effect: The role and impact of field work in the upper primary school. *International Research in Geographical and Environmental Education*, 8(2), 190–198. https://doi.org/10.1080/10382049908667608.
- Ömeroğlu, E., Büyüköztürk, Ş., Aydoğan, Y., Çakan, M., Kılıç Çakmak, E., Özyürek, A., Gültekin Akduman, G., Günindi, Y., Kutlu, Ö., Çoban, A., Yurt, Ö., Koğar, H., & Karayol, S. (2014). Okul öncesi sosyal beceri değerlendirme ölçeği öğretmen formunun geliştirilmesi: Geçerlik ve güvenirlik analizleri [Preschool teacher form development of social skills rating scale: Reliability and validity analysis]. 21. Yüzyılda Eğitim ve Toplum [Education and Society in the 21st Century), 3(8), 37–46.
- Orion, N., & Hofstein, A. (1994). Factors that influence learning during a scientific field trip in a natural environment. Journal of Research on Science Teaching, 31, 1097–1119.
- Özbey, S. (2009). Anaokulu ve Anasınıfı Davranış Ölçeği'nin (PKBS-2) geçerlik ve güvenirlik çalışması ve destekleyici eğitim programının etkisinin incelenmesi [Study of the validity and reliability of the Preschool and Kindergarten Behaviour Scales (PKBS-2) and to examine effect of the promoter education program]. Unpublished doctoral dissertation, Gazi University, Ankara.
- Özdemir-Topaloğlu, A. Ö. (2013). Etkinlik temelli sosyal beceri eğitiminin çocukların akran ilişkilerine etkisi [The influence of activity based social skills education on children's peer relationships]. Unpublished doctoral dissertation, Selçuk University. Konya.
- Öztürk-Samur, A. (2011). Değerler eğitim programının 6 yaş çocuklarının sosyal ve duygusal gelişimlerine etkisi [Effects of values program on social emotional development of 6 year old children education]. Unpublished doctoral dissertation, Selçuk University, Konya.
- Piaget, J. (2000). Çocukta zihinsel gelişim. In H. Portakal (Ed.), Trans. Cem Yayınevi: İstanbul.
- Rennie, L. J., & McClafferty, T. P. (1995). Using visits to interactive science and technology centers, museums, aquaria, and zoos to promote learning in science. *Journal of Science Teacher Education*, 6(4), 175–185.
- Rubin, K. H., Bukowski, W. M., & Parker, J. G. (2007). Peer interactions, relationships, and groups. In W. Damon, R. M. Lerner, & N. Eisenberg (Eds.), *The handbook of child psychology, 3 Social, emotional, and personality development* (pp. 571–645). New York: Wiley.
- Rudmann, C. L. (1994). A review of the use and implementation of science field trips. *School Science and Mathematics*, 94, 138–141.
- Şahin, B. K., Sak, R., & Şahin, İ. T. (2013). Parents' views about preschool education. Procedia-Social and Behavioral Sciences, 89, 288–292.
- San-Bayhan, P., & Artan, İ. (2009). Çocuk gelişimi ve eğitimi [Child development and education]. Ankara: Morpa Yayınları.
- Saul, J. (1993). Ready, set, let's go! Using field trips in your curriculum. Day Care and Early Education, 27(1), 27–29.
- Schultz, D., & Izard, C. E. (1998). Assessment of children's emotion skills. Unpublished research report. Newark: Delaware University.
- Seefeldt, C. (1993). Social studies for the preschool-primary child. New York: Macmillan Publishing.
- Senemoglu, N. (1994). Okul öncesi eğitim program hangi yeterlikleri kazandırmalıdır? Hacettepe Üniversitesi Eğitim Fakültesi Dergisi [Hacettepe University Journal of Education], 10, 21–30.
- Senemoğlu, N. (2012). Gelişim, öğrenme ve öğretim [Development, learning and teaching]. Ankara: Pegem Yayınları.
- Seven, S. (2006). 6 yaş çocuklarının sosyal beceri düzeyleri ile bağlanma durumları arasındaki ilişkilerin incelenmesi [The relationship between social skills an attachment in 6 years old children]. Unpublished doctoral dissertation, Gazi University, Ankara.
- Singal, N., & Swann, M. (2011). Children's perceptions of themselves as learner inside and outside school. *Research Papers in Education*, 26(4), 469–484. https://doi.org/10.1080/02671520903281617.
- Smith-Walters, C., Hargrove, K., & Ervin, B. (2014). Extending the classroom tips for planning successful trips. *Science and Children*, *51*(9), 74–78.
- Taylor, S. I., Morris, V., & Cordeau-Young, C. (1997). Field trips in early childhood settings: Expanding the walls of the class-
- Thompson, M. N., & Dahling, J. J. (2012). Perceived social status and learning experiences in social cognitive career theory. Journal of Vocational Behavior, 80, 351–361.
- Trawick-Swith, J. (2013). Erken çocukluk döneminde gelişim: Çok kültürlü bir bakış açısı) [Early childhood development: A multicultural perspective]. In B. Akman (Ed.), *Trans*. Nobel Yayınları: Ankara.
- Ulutaş, İ. (2005). Anasınıfına devam eden altı yaş çocuklarının duygusal zekâlarına duygusal zekâ eğitiminin etkisinin incelenmesi [The effect of emotional intelligence education on emotional intelligence of the 6 years old children attending preschool classes]. Unpublished doctoral dissertation, Gazi University, Ankara.
- Varış, F. (1996). Eğitimde program geliştirme [Curriculum development in education]. Ankara: Alkım Yayınevi.
- Vygotsky, L. S. (1998). The collected works of L. S. Vygotsky (Vol.5). Child Psychology. New York: Plenum.
- Woerner, J. J. (1999). The field trip in the earth science classroom. *Guides Classroom Teacher*, 1–19. (ERIC Document Reproduction Service No. ED 446901).