



## The Experiences and Achievements of Classroom Teacher Candidates during a Play-Based Reflective Workshop in which Open-Ended Materials Were Used

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### Abstract

Open ended materials are materials with no specific set of directions and they can be used alone or together with other materials. They can be moved, carried, combined, redesigned, lined up, taken apart and put back together in multiple ways. The aim of this study was to determine personal and professional experiences and achievements of classroom teacher candidates during a play-based reflective workshop in which open ended materials were used. In this study qualitative research design and action research approach were used. Subjects of the study were 16 second grade students (10 female, 6 male) studying in the Department of Elementary Education, Division of Primary Education at the Faculty of Education in the spring semester of 2013-2014. The results showed that the classroom teacher candidates defined the open-ended materials as developing creativity, are useful, easy to find, safe/harmless but also as confusing. This workshop provided the classroom teacher candidates a new perspective on play and physical activities based on their past experiences. Participants stated that they gained some of the personal and the professional achievements through workshops such as creativity, collaborating, creating an enjoyable educational environment, effective communication skills, reflective thinking, goal setting, problem solving, using second hand materials according to the course objectives, etc. In addition, the participants agreed that this workshop was very successful and these kind of workshops should be provided for all classroom teacher candidates. Moreover, it was determined that this workshop created awareness about the "Play and Physical Activities" course in the curriculum which candidates would be teaching in their future profession.

### Keywords

Open-ended materials  
Reflective play  
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## Introduction

Teachers, who are the architects of qualified manpower needed in society, have important responsibilities in the regulation of the teaching-learning environment. Therefore, nowadays for not only developed societies but for all societies the education and the qualifications of the teachers, which are the fundamentals of success for an educational system, are the most important and current topics continuously attract all the relevant professionals and researchers.

The Council of Higher Education (CHE) in Turkey and the World Bank developed a "Teacher Candidate Profile" for the requirements of teacher effectiveness by the National Education Development Project: Teacher Pre-Service Education Project (1997). For this profile teacher candidates are required to have competencies such as managing teaching-learning processes, student personality services (counselling) and having personal and professional characteristics (Demirhan, 2006, p. 30). Among these competencies "using teaching materials skilfully" which is under the "managing teaching-learning process" theme is one of the competencies which are expected from teacher candidates to have.

In 2012 a new development was carried out in our country in the public education system known as "4 + 4 + 4" and "Play and Physical Activities" course, integrated in the education system for the elementary school students under the guidance of their classroom teachers for one hour a day so a total of five hours per week for 1st-3rd grade and two hours a week for 4th grade students. The purpose of this course is "to prepare students for the next level of their education through play and physical activities by fundamental movements which they will use during their entire life, active and healthy life skills, concepts and strategies along with their associated life skills development" (MEB, 2012). With the regulations made it was decided that this course will be carried out by classroom teachers for four years in elementary school. Guiding assistance and tools for classroom teachers during the implementation of this course are: "Physical Education and Sport Culture" and "Teaching Physical Education and Plays" courses which they took during their education, and also curriculum about this course, "Games Collection Booklet" and Physical Activity Cards (PAC) prepared by the Ministry of Education (ME) for classroom teachers.

Even though classroom teachers are supported by various play and physical activity cards to be able to conduct the Play and Physical Activities course, there are no physical education teachers in elementary schools in Turkey. So it is a fact that the materials which can be used in physical education classes for a healthy and effective processing of the course are not sufficiently available in the schools either. Therefore how much the course is considered according to the objectives it would not be possible to talk about the functionality of the program without the necessary environment and materials. For this reason the teachers should take the responsibility of finding or producing suitable materials to process the course effectively and efficiently. However, because the materials to be used for reaching the objectives are numerous, cost much as well as are difficult to protect, maintain and repair and thus are considered as major problems for classroom teachers. At this point using open-ended (loose parts) materials can be considered as a solution of problems related to the subject for classroom teachers.

The open-ended concept includes many possible outcomes in student learning and planning of teachers and parents for diverse and interesting activities, materials, environment and projects. Open-ended materials are the tools that support the development of school children necessary for their success in all areas but especially cognitive and skills development. They are those which young children can use for creative play in any way they like, within their teacher or parents guidelines for safety. There is no "one" answer or one "right" way to use them (Petersen, 2014). According to Neill (2013) open ended materials are materials with no specific set of directions and they can be used alone or together with other materials. They can be moved, carried, combined, redesigned, lined up, taken apart and put back together in multiple ways (Neill, 2013). Old cardboards, boxes, used corks, bottle caps and jar lids, pieces of yarn, fabrics etc. are naturally considered as ordinary objects that might be

unrecognized. But when we give them to children they will be the fundamentals of powerful learning experience called open-ended play (Petersen, 2014). This opposed to battery-operated toys that require that children only push a button "to send the toy into an ecstasy of beeping and flashing and tinny music while only toys do the playing and the child is reduced to the passive role of an audience" (Wilson, 2009; cited in Neill, 2013). Open-ended materials set children free in their creativity and imagination to change the world around them in infinite ways (Neill, 2013). When a child is playing with open-ended materials he/she feels less pressure. As a matter of fact there is nothing but freedom in this environment. Using open-ended materials in play improves creativity of children as well as self-confidence (Petersen, 2014). The more flexible the materials are in their environment, the greater the level of creativity and inventiveness children express (Neill, 2013).

Drew and Rankin (2004) identify seven key principles for using open-ended materials in early childhood classrooms: 1. Children's spontaneous, creative self-expression increases their sense of competence and well-being in child and adulthood. 2. Children extend and deepen their understandings through multiple, hands-on experiences with diverse creative materials. 3. Children's play with peers supports learning and a growing sense of competence. 4. Children can learn literacy, science and mathematics joyfully through active play with diverse, open-ended materials. 5. Children learn best in open-ended explorations when teachers help them make connections. 6. Teachers are nourished by observing children's joy and learning. 7. Ongoing self-reflection among teachers in community is needed to support these practices.

A limited number of studies related to open-ended materials have been performed mainly focussing on pre-school teachers. In one of those studies Sandberg and Pramling-Samuelsson (2005) found that male preschool teachers considered play as "it contributes to fun and playfulness" and "it provides physical development for children". Female preschool teachers on the other hand defined play as "a valuable activity" and emphasize the "importance of social development for children". All preschool teachers in the study emphasized that it is important to create inspiring environments for both indoor and outdoor play. In another study Nell, Drew, Rankin, Merrill, Klugman and Simmons (2011) stated the powerful reminder of a symposium on play for pre-school teachers was that a number of participants reflected that learning through play is for all ages, not just for children. According to the outcomes of the play symposiums teachers recognized the need for a change in their practice and have scheduled more time for play, increased use of open-ended materials and incorporated music in their classroom.

When the studies related to the subject on students were reviewed, Beisser, Gillespie and Thacker (2013) stated that according to gifted 5th and 6th grade students participating, play is a significant activity for learning and socializing in the general classroom, gifted programs and outside their classrooms. Students see play also as motivating and as a way to increase attention, retention, and focus in learning. Results of this study suggest that parents should acknowledge their children's need for play in all three domains (cognitive, physical and affective) and allow time for self-directed play after school with limits on scheduled activities. Bekker, Sturm, Wesselink, Groenendaal and Eggen (2008) in their study developed a prototype to examine whether children enjoy playing with simple open-ended objects. Children between 7 and 11 years old were asked to play with the objects in a free-play and pre-set game session. The study shows that children create a wide variety of games and practice many social skills when negotiating the rules of various games. In addition, children felt playing with the objects in the free-play sessions was more fun than in the pre-set sessions.

During the review of literature related to the subject there has not been found any study on candidate teachers showing the use of open-ended materials with reflective approach and showing the relationship between the course and curriculum. Therefore candidate classroom teachers were asked to draw attention to the issue through the development of personal and professional awareness during the applied workshop because they will be the future professionals who would be in charge of "Play and Physical Activities" course at elementary school which was changed at the beginning of the academic year of 2012 in Turkey. In this context it was aimed in this study to determine personal and

professional experiences and achievements of candidate classroom teachers during a play-based reflective workshop in which open ended materials were used.

For this purpose, the sub-questions in the survey were identified as follows:

1. Which games do classroom teachers remember belonging to their past experiences?
2. Which personal and professional achievements did candidate classroom teachers obtain through a play-based reflective workshop in which open ended materials were used?
3. How were workshop experiences associated with the elementary school "Play and Physical Activities" curriculum?
4. What are the opinions and suggestions of the candidate classroom teachers about the experiences of the workshop in which open ended materials were used?

## **Method**

### *Research Design*

In this study qualitative research design and action research approach (liberating/improving/critical) were used. It is important in action research to have "every environment is unique" principle and most importantly involvement of participants. Participants can be directly observed in their natural environment and they should contribute to the study by opening up their experience to the researcher. In such a process of problem solving with continuity there would be an intense interaction and sharing between researchers and practitioners (Yıldırım, & Şimşek, 2005, p. 295).

The purpose of using action research with qualitative researches is having a flexible structure of qualitative research and also not focusing on generalization. Moreover through liberating/improving/critical action research approach it was aimed to gain new knowledge, skills and experience and to help developing a critical point of view for the applications. In addition, through this approach it is expected that the researcher becomes more competent in the profession and gains ability to integrate theory and practice and also gains political views related to the field.

### *Participants*

Subjects of the study were 16 second grade students studying in the Classroom Teaching Department of Primary Education at the Faculty of Education in the spring semester of 2013-2014. Subjects were 10 female and 6 male ( $M_m=21\pm.63$ ;  $M_f=19.9\pm.74$ ). The workshop was conducted for the students as the first practical application of Teaching Physical Education and Play course which they took in the spring second graduate education. Before taking that course students who participated in the workshop took Physical Education and Sport Culture course (3 hrs/1 hrs theoretical- 2 hrs practical) during the fall semester of their second year. Subjects were referred to as "candidate classroom teachers" in the entire text.

### *Collecting Data*

In order to collect data observation by researcher, reflection papers with structured open ended questions and also the drawings of the participants were used. Research was conducted from the beginning till the end by the researcher herself as a "participant observer" and reflection papers were presented and collected by the researcher. In addition, the researcher as practitioner observed candidate classroom teachers during the workshop.

In this study, reflection papers were used for data collection; open-ended questions were used which were determined by the researcher for the candidate classroom teachers to express their experiences and achievements about open-ended materials and play. Whilst preparing the questions the necessary information about the aim and the method of the study was given to the two experts (one in teaching physical education and one in qualitative research methods). Afterwards expert's opinion about the questions in the reflection paper was asked from them. As a result content and structure of the sentences were edited and inconsistencies were corrected. Reflection questions were given to candidate classroom teachers 3 times during the workshop and they were asked to answer

these questions within a timeframe of approximately 15 minutes. In reflection 1 three questions, in reflection 2 three questions and in reflection 3 four questions were given to candidate classroom teachers on paper and they were asked to answer the questions according to their views and perceptions generated from the activities in the workshop. At the beginning of the workshop, participants were asked to draw childhood games of different ages based on their past experiences in order to be able to draw participant's attention to the workshop and to warm up. During applications photos were taken at every stage.

#### ***Role of the Researcher***

The researcher is an expert who completed her PhD in the field of Curriculum Development and Teaching in Education, has been an academician at The Department of Teaching Physical Education for 21 years and has been conducting theoretical and practical lessons in her field of study for 15 years. The researcher was a physical education teacher in an elementary school for two years at the beginning of her professional career. The researcher was also one of the experts as a coordinator and teacher educator in the curriculum development commission of Ministry of Education (ME) in the period of developing of a teaching program of "Play and Physical Activities" course.

The participant-observer role of the researcher in this workshop enabled the researcher to participate fully in the lives and activities of subjects and interact with them and therefore the researcher has become a natural part of the process. Furthermore this participant-observer role helped the researcher to understand the outcomes derived from the subjective perception of data sources and provided an advantage for the validity and reliability of the study (Yıldırım, & Şimşek, 2013).

#### ***Data Collection Procedure***

At the beginning of the workshop, required permissions for teachers who would participate in the workshop were arranged and voluntary participation was provided. Then the purpose of the workshop, presentation of the materials, effective use of the space, expectations and motivation speech were presented to the participants by the researcher. The workshop took 180 minutes. Table 1. shows the action (implementation) plan of the data collection processes in detail.

**Table 1.** Action (Implementation) Plan Regarding the Workshop Processing

<b>ACTION (IMPLEMENTATION) PLAN</b>		
<b>Duration</b>	<b>Implementation Phases</b>	<b>Implementation Details</b>
Phase 1. (15 min.)	<b>Introduction speech</b> (Explanations to collected group).  * Ensuring the awareness of purpose *Presentation of materials *Use of space *Motivation speech	- Giving introductory speech to the participants (Why are we here, what are we going to do, why and how, etc). - Taking the permissions - Explanation of the workshop objectives - Emphasizing the importance of the objective - Presenting the materials in the middle of the gym - Drawing candidate classroom teachers ' attention to the materials being second hand materials and how they work - Explanation of important points in material selection - Description and arrangements for the effective use of the space - Using music for motivation and providing a warm atmosphere
Phase 2. (20 min.)	<b>Warm up</b> (Exploration of the game and preparation)  * drawing the pictures of the game	-Explanation -Introduction (Requesting participants to consider childhood games of all ages and the ambiance) - Giving candidate classroom teachers a blank paper and asking them to describe the games they played during the period of 3-5, 6-10, 12-18 years of age and during their adulthood through drawings.
Phase 3. (25 min.)	<b>*Individual Implementation</b> (enabling them to feel individual reflective play experience)	- Candidate classroom teachers will be asked to produce an activity and a play individually by using open ended materials of their choice. - Sharing activities and plays resulted at the end of the given period with all class.
Phase 4. (15 min.)	<b>Interim Evaluation 1</b> (Reflection 1)	At the end of the given time asking candidate classroom teachers to answer 3 questions on Reflection 1 paper.
Phase 5. (25 min.)	<b>* Paired Implementation:</b> (enabling them to feel individual reflective play experience)	- Candidate classroom teachers will be asked to find a partner to produce a play and an activity with open ended materials of their choice. - Sharing activities and plays resulted at the end of the given period with all class.
Phase 6. (15 min.)	<b>Interim Evaluation 2</b> (Reflection 2)	At the end of the given time asking candidate classroom teachers to answer 3 questions on Reflection 2 paper.
Phase 7. (20 min.)	<b>Interim Evaluation 3</b> *Presenting the captured photos *Written evaluation	- Sharing the photographs of candidate classroom teachers which were captured during their work with the class. - Candidate classroom teachers will be asked to write down what they feel and think during these presentations.
Phase 8. (20 min.)	<b>*Practicing with group</b> (Reflective play experience with groups of four)	- Requesting from the candidate classroom teachers to form groups of four and produce an activity and a play by using open ended materials of their choice. -Sharing activities and plays resulted at the end of the given period with all class.
Phase 9. (15 min.)	<b>Interim Evaluation 4</b> (Reflection 3)	At the end of the given time asking candidate classroom teachers to answer 4 questions on Reflection 3 paper.
Phase 10. (10 min.)	<b>End of workshop</b>	- Candidate classroom teachers will be asked to collect materials - Making the overall evaluation of the workshop.
<b>Total Duration</b>	The workshop took 180 minutes.	
<b>MATERIALS</b>	During the workshop open ended materials including different sizes of pet bottles, egg cartons, toilet paper rolls, beads, cones, yogurt and cheese container, handmade paper, pieces of fabric, ribbons, different sized stones, bottles and jars' covers, etc. were used.	



**Picture 1.** Examples of Open Ended Materials Used in the Study

### *Data Analysis*

“Descriptive analysis technique” was used to examine the data gathered from the drawings and answers to the reflection papers of the candidate classroom teachers. “Content analysis technique” was used to define data, to combine similar data within the framework of the specific concepts and themes and also to reveal the facts which might be hidden in data.

*Coding Data;* Data was processed and transcribed into a word document. In the next step data and statements were coded within expressed statements in short sentences by two experts who are experienced in qualitative researches and dissertation/thesis (as supervisor/advisor). During the coding overlapping statements were grouped as themes. The candidate classroom teachers' opinions on the statements related to themes were presented in the study findings as S1, S2, etc.

### *Validity and Reliability*

*Validity;* The findings were arranged to gather meaningful and consistent data. This data was coded by two researchers and the consistency between the two codes was checked and formed as a whole. The data obtained in this study was coded by the researcher herself and the second researcher who is expert in the field and has been teaching qualitative research methods in the university for a long time. Furthermore she participated during the workshop process and she had knowledge about the aim and the method of the study.

*Reliability;* Researcher clearly defined the methods and stages of the study. It was openly described what has been done on data collecting, processing, analysis, interpretation and achieving results. Findings were clearly associated with the expressed opinions. During data analysis prejudices and misunderstandings were revised and consequently invalid data was extracted and excluded.

The statements in the study were read and encoded independently by both two researchers and themes were created. The "agreement" and "disagreement" for identified codes and themes determined by both researcher self and the other expert were discussed and necessary arrangements were done. For the reliability Miles and Huberman's (1994) formula was applied.

$$\text{Reliability} = \frac{\text{Agreement}}{\text{Agreement} + \text{Disagreement}}$$

As a result, the agreement for two researchers for the total statements from three reflection papers resulted in 120 and disagreement in 32. According to Miles and Huberman's (1994) formula the correspondence percentage was calculated as 79%. Since the correspondence percentage is more than 70%, the research is accepted as reliable.

*Triangulation;* Data was obtained by different data collection techniques and variation of the data was provided.

## Results

The results obtained from the results based on the analysis of research questions are shown below respectively under the titles of: the games which candidate classroom teachers played in the past, their opinions about open-ended materials, contribution of individual and paired reflective playing experience to the personal and the professional achievements, relationships between the workshop experiences and “Play and Physical Activities” curriculum and the opinions and recommendations for the workshop.

### *Games Played in the Past*

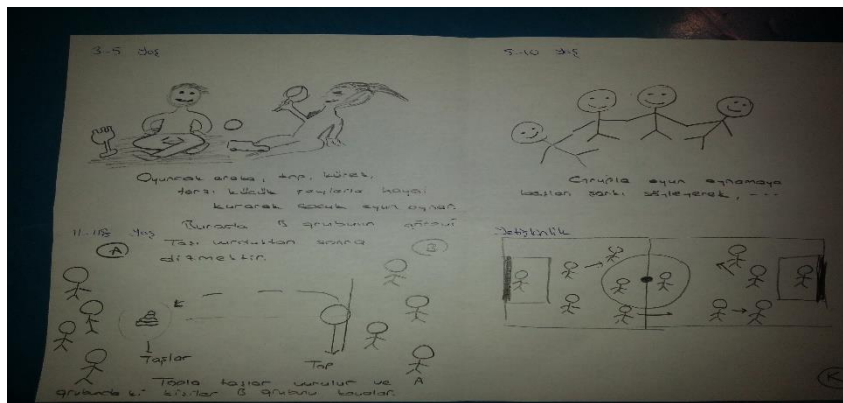
At the beginning of the workshop candidate classroom teachers were asked to describe the games they played during the period of 3-5, 6-10, 12-18 years of age and during their adulthood through drawings. After analysis of the drawings the following results were derived.

**Table 2.** Games and Toys/Materials of the Candidate Classroom Teachers at Different Age Periods

Age Groups	Games	Toys/Materials
3-5 years of age	-Sand and Soil Games (5 persons) -Ball Games (5 persons) -Playing with Doll (3 persons) -Playing House (2 persons) -Jump Rope (2 persons) -Swing (2 persons) -Playing with train and cars (1 person) -Playing with marbles (1 person)	*Doll *Ball *Lego *Teddy Bear *Bucket/Shovel Sets, etc. *Light/sound and music toys *Taso *Marbles *Train and cars
6-10 years of age	-Rope Games (8 persons) -Hide and Seek/Dodge ball (6 persons) -Ball Games (6 persons) -Lego/puzzle/Rubik's Cube (3 persons) -Hopscotch/ line games (3 persons) -Marble Games (3 persons) -Music Games (2 persons) -Running Games (2 persons) -Playing House (2 persons) -Taso (1 person) - Computer Games (1 person)	*Doll *Ball *Rope *Kitchen tools *Lego/cubes *Marbles *Taso
12-18 years of age	-Sport Games (basketball-7 persons; volleyball-5 persons; football-3 persons; badminton 1 person; table tennis-2 persons) -Dodge ball (5 persons) -Jump Rope (4 persons) -Computer Games (1 person) -Colourful Istop (1 person) -Hide and Seek (1 person) -7 towers (1 person) -Chess/checker/dart (1 persons each) -Rummikub (1 person)	*Ball *Rope *Rackets *Rummikub *Chess/dartboard *Little Stones *Backgammon *Computer
18 +	-Sport Games (volleyball-6 persons; table tennis-4 persons; football-4 persons; basketball-2 persons; badminton1 persons) -Backgammon/card games/rummikub (3 persons) -Running (2 persons) -Computer Games (2 persons) -Bowling (2 persons) -Pilates and fitness activities (2 persons) -Folk Dance (1 persons) -Hiking (1 persons) -Chess (1 person) -Paintball (1 person)	*Ball *Rackets *Pilates balls *Backgammon *Game Cards *Rummikub *Chessboard *Computer/telephone



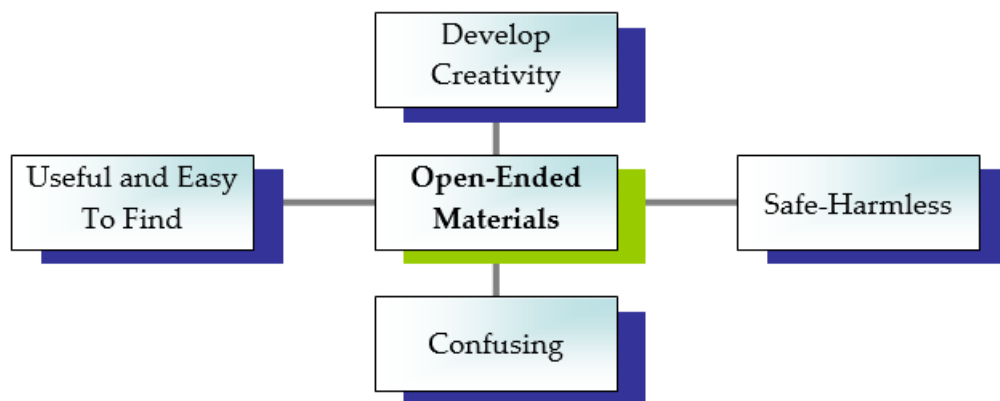
According to Table 2, candidate classroom teachers stated that during 3-5 years of age they mostly played games which they could play as an individual with no or little rules; during 6-10 years of age they mostly played games with very easy rules, in pairs or in little groups. It was observed that among these ages there was no difference in games of female and male candidate classroom teachers. During 12-18 years of age candidate classroom teachers emphasized that they mostly played a variety of sportive branches and traditional children games, during their adulthood they played sportive games similar to their 12-18 years of age period and also some of the strategic games without physical effort such as: (backgammon, rummikub, card games, etc.). In these years of age female candidate classroom teachers mostly preferred games with rules and sportive games like; hide and seek, dodge ball, volleyball, etc. Male candidate classroom teachers on the other hand mostly preferred sportive branches and then computer games and games like backgammon and card games. An important comment that can be said for the drawings that only a few candidate classroom teachers gave very little information about using open-ended materials in their play in the past (3-5 years of age).



**Picture 2.** Example Picture Showing the Games which Candidate Classroom Teachers Played in Different Age Groups

### *Opinions about Open-Ended Materials*

During the workshop candidate classroom teachers were asked to produce an activity and a play individually by using open ended materials of their choice in the individual reflective play experience phase. Afterwards candidate classroom teachers produced an activity and a play by using open ended materials sharing them with the other students and the instructor. At the end of this work Reflection 1 paper with 3 questions was given to the candidate classroom teachers and asked to answer question 1: opinions about open-ended materials. The opinions of candidate classroom teachers about open-ended materials are shown in Figure 1.



**Figure 1.** The Opinions of Candidate Classroom Teachers about Open-Ended Materials

According to the analysis of the answers of the candidate classroom teachers about open-ended materials showed in Figure 1. Candidate classroom teachers defined materials as develop creativity (3 persons), were useful and easy to find (5 persons), safe/harmless (3 persons) but also confusing (5 persons). The statement : “Materials can be easily found and were selected so that they do not harm children. Although it seems at first nothing can be produced, by using our imagination an activity/play can be designed” (S12) emphasizes that the materials were **useful and easy to find, develop creativity** but also **confusing**. A statement related to being **safe and harmless** was: “When you say open-ended materials, everything that does not harm the students came into my mind” (S1). On the other hand S2 and S6 particularly focused on materials being **confusing**. “I am confused about what kind of activity I can produce with open-ended materials but when I started to think about it I realized that I can produce a very good activity with the materials” (S2) “I could not think of anything at first because I came across such an event for the first time. I wanted to produce a music course activity first but I have changed my mind” (S6).

### **Contribution of Individual and Paired Reflective Play Experience to Personal and Professional Achievements of the Candidate Classroom Teachers**

Candidate classroom teachers were asked first as an individual and then with a partner to produce a play and an activity with open ended materials. At the end of this work Reflection 1 and 2 papers were given to the candidate classroom teachers and they were asked to answer the questions which try to reveal the contribution of personal and professional achievements. The themes occurring according to the analysis of the answers of Reflection 1 and 2 papers are shown separately in Table 3: the individual play experience and in Table 4: paired play experience.

**Table 3.** Personal and Professional Achievements of the Candidate Classroom Teachers on Individual Play Experience

Questions	Codes	Theme (Types of Achievement)
Can you please explain the factors which helped you during the creation process of play/activity with open-ended materials?	Previous Experiences	Using Personal Experiences
What kind of benefits would open-ended materials provide for your future professional life?	Preparing class environment with less and limited materials Gaining creative features Being able to prepare a “fun” course Producing play/activity with second hand materials Vocational awareness	Professional Achievements
Do you think that this workshop was useful for your personal development? How?	Developing creative thinking Designing play according to the developmental characteristics of candidate classroom teachers	Personal Achievements
How was this study related to your past experiences? Did you use your knowledge during the processes and for the product in the study?	I used my experiences.	Using Personal Experiences

The majority of the candidate classroom teachers answered to the question “Can you explain the factors which helped you during the creation process of play/activity with open-ended materials?” in Reflection 1 paper: **previous experiences**.

Some of the codes resulting from the question; “What kind of benefits would open-ended materials provide for your future professional life?” were as follows: **preparing class environment with less and limited materials** “I saw that I can design many plays and activities with a few and limited open-ended materials. I also saw that teachers can create suitable environments in accordance with the level of students for physical education courses as well as for other courses” (S2); **gaining creativity features** “More second hand materials more ideas, more ideas more activities” (S7) and “open-ended materials provide convenience, we can design creative activities as we want” (S3); **producing play/activity with second hand materials** “I have learned to prepare a lesson with what I have without concerning what I do not have if I would work at a school which is not much developed and facilitated” (S1) and “From now on I will collect everything I can use as a material “ (S8); **being able to prepare a “fun” course** “I have learned what I have never thought of. I gained awareness. I learned that I can produce a play with second hand materials” (S10), I think I am not going to have difficulty in teaching this course during my professional life” (S5) and “these examples would be helpful in the planning of 1 to 4 years of elementary school activities” (S9). When the answers of candidate classroom teachers to this question were analyzed it was observed that they have reached professional achievements which would make significant contributions to their work in the future.

Another question asked to the candidate classroom teachers was “Do you think that this workshop was useful for your personal development? How?. Almost all candidate classroom teachers stated that the workshop contributed to their personal development. Candidate classroom teachers stated that this contribution **developed their creative thinking** and they learned to **design a play according to the developmental characteristics of candidate classroom teachers**. Candidate classroom teachers expressed their opinions as follows:

“Yes. It taught me creative thinking” (S1, S3, S8, S14, S16); “Yes, because these kinds of activities both entertain and educate” (S4); Yes, because I have learned more or less what kind of play I am going to teach according to the developmental characteristics of the students” (S10) and “Yes, because I realized that unlimited things can be done with limited materials” (S15).

“How was this study related to your past experiences? Did you use your knowledge during the processes and for the product in the study?” was one of the other questions asked to the candidate classroom teachers and most of the candidate classroom teachers stated that **they used their past experiences** to produce a play/ an activity. Some of the examples of the candidate classroom teachers’ responses to this question were as follows:

“ It is related to my experiences because I played with things considered as trash when I was a child” (S7); “There was an influence by the games I played during my childhood” (S11); “ Of course there was an influence of running and football that I have been doing since early times” (S15) and “Activities and plays remaining from elementary school years have an important role in this work” (S16).

**Table 4.** Personal and Professional Achievements of the Candidate Classroom Teachers on Paired Play

Questions	Codes (Aims)	Theme (Types of Achievement)
What is the meaning and importance of the play/activity you and your pair produced in connection with process and product?	Producing useful activities and play	Personal and Professional Achievements
	Producing fun activities and play	
	Co-operation	
	Accomplish much work with restricted materials	
	Increasing participation	
What is the meaning and importance of paired work in connection with process and product?	Using Creativity	Personal Achievements
	Increasing cooperation	
	Producing ideas together	
	Solidarity	
	Trusting friend	
	Improving creativity	
	Using time efficiently	

During the workshop in the paired implementation phase candidate classroom teachers were asked to find a partner and to produce a play and an activity with open ended materials. At the end of this work Reflection 2 paper was given to the candidate classroom teachers to answer 3 questions. The first question was: *“What is the meaning and importance of the play/activity you and your pair produced in connection with process and product?”*. The answers of the candidate classroom teachers were grouped under the titles of: **“producing useful activities and play”**, **“producing fun activities and play”**, **“co-operation”**, **“accomplish much work with restricted materials”**, **“increasing participation”** and **“using creativity”**. Candidate classroom teachers expressed their opinions about this question as follows:

*“The processes and the product we created seem to be quite useful for a teacher in the village school where there would be no materials” (S4); “Here very different games can be produce by using imagination. The materials work for different purposes as well as its actual purpose”(S5). “There is no need for money to have fun and play games” (S9); “Everything we see as waste can be used in education” (S12) and “I saw that I can design many games in a short time with little and limited materials. In addition, there is no need for many materials for children to have fun if it makes them happy” (S14).*

When these answers from the candidate classroom teachers were analyzed as a whole, it can be said that paired work provides both personal and professional achievements to the candidate classroom teachers.

The second question was: *“What is the meaning and importance of paired work in connection with process and product?”*. The answers of the candidate classroom teachers were; **“producing ideas together”**, **“increasing cooperation”**, **“improving creativity”**, **“solidarity”**, **“using time efficiently”** and **“trusting friends”**. Below the examples of answers of candidate classroom teachers are given.

*“Paired work was good. While he/she was doing something I was doing something else. What I could not think of came from him/her, but I improved his/her idea”(S3); “There was an exchange of ideas. We were more creative. We could produce more in less amount of time” (S9); “Paired work is a richness in terms of generating ideas. The combination of two different ideas emerged into a better product” (S12); “Different ideas can occur or the missing parts of the suggested idea can be seen more clearly and can be fixed. In general it teaches cooperation and solidarity” (S11) and “We produced more ideas. Many hands make light works. We helped each other in production” (S4).*

When these opinions from candidate classroom teachers are analyzed it can be said that achievements through paired work contributed to candidate classroom teachers with respect to their personal development.

#### *The Relationship between Workshop Experience and "Play and Physical Activities" Course Program*

At the end of the given time for candidate classroom teachers to produce individually a play/an activity with open ended materials, Reflection 1 paper was given and they were asked to "explain the purpose of the play/activity that they want to produce". The answers of the candidate classroom teachers are shown in Table 5.

**Table 5.** Aim of the Play/Activity and Its Theme

Questions	Codes (Aims)	Theme (Type of Achievement)
Can you explain the purpose of the play/activity that you want to produce?	To improve spatial awareness	Professional Achievements
	To improve locomotor movement	
	To improve manipulative movements	
	To improve balancing (nonlocomotor) movements	
	To improve personal skills	
	To improve thinking skills	
	To support teaching of the other courses	

The first aim which was derived after coding the answers of the candidate classroom teachers to the question: "Can you explain the purpose of the play/activity that they want to produce?" was **spatial awareness**. Another aim was **to improve locomotor movement**. These aims were expressed in the statements of S1 as: "To improve spatial awareness I tied up toilet paper rolls. Children had to tie those roles to their ankles and try to eliminate other children from the play by crushing the roles tied to each other's feet in the designated space". Another aim occurring according to the answers of the candidate classroom teachers was **to improve manipulative movements**. The statement of S14 about this theme was: "I made a device for a target game. My aim was to improve hand-eye coordination of children. The other aims were **to improve balancing (nonlocomotor) movements** and **to support teaching of the other courses**. These themes were emphasized by the candidate classroom teachers as follows:

*"When I was preparing the game I tried to make it suitable for 2nd class and for being able to improve balance" (S2); "I made a rhythm instrument, so that children could follow the rhythm I give. One on a single lid full beat, on two lids half beat and on four lids quarter beats will be played" (S5); "I designed my play both to improve a child's balance and to make a mathematics course like a play to learn easier and permanently" (S12); "I wanted to do something to improve children's tooth brushing habits because I think both tooth brushing and sport are problems for children" (S15).*

**To develop personal skills** was another aim that emerged as a theme. An example statement about this code emphasized by S6: "I prepared a circuit in my play to improve co-operation and trust between children". It was observed that play/activities which candidate classroom teachers designed were related to the teaching and development fields which form the main structure of "Play and Physical Activities" course program in elementary schools. These fields are: fundamental movement skills (movement competence), active and healthy life skills and life (social, individual and thinking) skills (MEB, 2012).

### ***Opinions and Suggestions***

At the end phase of the workshop candidate classroom teachers were asked to form groups of four and produce an activity/a play by using open ended materials which they can use in their future professional life. Afterwards Reflection 3 paper was given to them and they were asked to answer the question: *“What are your opinions and suggestions about the experience of this workshop in which open ended materials were used? Almost all candidate classroom teachers expressed their opinions and experiences of the workshop were **positive**. Some of the examples of their opinions were: “The work was quite well (S1, S8, S15); “Work was very good. It must be provided for each classroom teacher student” (S3); “It was work that I liked very much” (S5) and “It was very good and informative” (S6).*

In this phase candidate classroom teachers were also asked to give their recommendations about the workshop and these recommendations are given below:

*“It was very good but short” (S9); “I do not have any critics or recommendation” (S2, S13, S14, S16); “There could be more materials” (S4, S10); “Materials such as a medication packs could be added” (S15).*

In addition, during the workshop photos were taken at every stage and PowerPoint presentation was prepared with these photos and presented to the candidate classroom teachers before Reflection 3 paper was given. Afterwards candidate classroom teachers were asked to write down what they feel and think during these presentations. In some of the answers candidate classroom teachers stated that: **“they were happy-** *I noticed that I was happy during this work (S1, S2,S3,S7,S10,S12)”; “workshop was fun-The work was really fun (S5,S9,S7,S11)”; “there was a high level of participation-Everybody participated (S6,S13)” and “desired products were produced-Regardless of being created individually or group wise, very nice products were created in the end (S8)”.*

### **Discussion**

Play is an activity that enhances a child's mental capacity. It is the most delightful way to comprehend and to learn the outside world and to be prepared for life. It is a tool for a child to recognize and understand his/her inner emotions, conflicts and anxiety feelings. Play is part of learning and healthy development. Through play children learn to socialize and how to establish a relationship (Topaloğlu, & Aslan Gördesli, 2012). When children grow games change and become more complicated. For this reason at the beginning of the workshop candidate classroom teachers were asked to describe the games they played during different years of age through drawings. They stated that during 3-5 years of age they mostly played games which they could play as an individual with no or little rules and during 6-10 years of age they mostly played structured games with very easy rules, in pairs or in small groups.

Children between the ages of 3-6 play imaginary and group games, between the ages of 4-6 however, in accordance with their development of physical movements they begin to enjoy playing ball, running, jumping and climbing. Children between the ages of 6-8 pay attention to logical thinking and order. This affects their choice of play as well. At this age children are done with egocentrism and they want to set the rules at the beginning of the play and stick to them until the end (Sevinç, 2010). During school period children of 7-11 years of age start playing games with rules, sportive branches that require physical activity begin to be meaningful to them (Topaloğlu, & Aslan Gördesli, 2012). The games candidate classroom teachers mentioned (3-5 and 6-10 years of age) are consistent with the games which Topaloğlu and Aslan Gödesli (2012) and Sevinç (2010) describe. In addition, this information from the candidate teachers is also supported by Piaget's theory of play. According to this theory during 11-12 years of age children are in the stage of structured play with rules and they are able to apply cognitive skills to understand the structure of play. The rules in play require children to set the rules themselves or to apply the rules which already exist (Aral, Gürsoy, & Köksal, 2001; Koçyiğit, Tuğluk, & Kök, 2007). The candidate teachers stated that they mostly played a

variety of sportive branches and traditional child games during 12-18 years of age and they played sportive games during their adulthood similar to their 12-18 years of age period and also some of the strategic games without physical effort such as: (backgammon, rummikub, card games, etc.). This information implicates that play belongs only to childhood period but is important for all people of different ages and also people play different types of games in different periods of their life. This supports Piaget's theory of stages of development "play is a lifelong process of development and learning" (Koçyiğit et al., 2007).

The candidate classroom teachers defined open-ended materials as: developing creativity, being useful, easy to find, safe/harmless but they perceived these materials also as confusing. Definitions of the candidate classroom teachers of open-ended materials were supported by the definitions of different researchers on the same subject (Neill, 2013; Petersen, 2014). According to Petersen (2014) open-ended materials are like open-ended questions. There is no "one" answer or one "right" way to use them. Using open-ended materials nurtures both the child's creativity and self-esteem and these materials are safe. Despite the fact that candidate teachers used these materials for the first time in classrooms, it was observed that they made similar definitions to the academic definitions. However candidate classroom teachers defined materials as confusing as well. Some candidate classroom teachers indicated that they came across these kind of materials in the courses for the first time and it was very different to use these materials to achieve a goal in the courses. Therefore they might have perceived open-ended materials as confusing.

The majority of the candidate classroom teachers answered to the question "*Can you explain the factors which helped you during the creation process of play/activity with open-ended materials?*": previous experiences. This finding confirms that the opportunities and learning environments offered to the candidate classroom teachers in the past affect their productivity in the future. Candidate classroom teachers designed a new learning-teaching environment for their own students based on the games and activities they played in different age periods and educational opportunities offered to them in the past. This result also supports the constructivist learning approach. According to constructivism the levels of experience and readiness are important for people to construct their own understanding and knowledge of the world (Airasian, & Walsh, 1997; Brooks, & Brooks, 1993; Özden, 2005). In addition, in various studies classroom teachers stated that they are not able to teach physical education courses adequately because they do not know what to do and they are not at a desired level of competence (Harris, Cale, & Musson, 2011; Harris, Cale, & Musson, 2012; Özer, 2010). Therefore the quality of educational programs offered to classroom teachers is highly important and also increased level of readiness of classroom teacher candidates should be provided.

The candidate classroom teachers were also asked: "*What kind of play/activity that they want to produce with open-ended materials?*". The aims which were derived after coding the answers of the candidate classroom teachers to the question were: to improve spatial awareness, locomotor movement, manipulative movements and balancing movements; personal skills, thinking skills and also to support teaching of the other courses (interdisciplinary). The essence of the "Play and Physical Activities" course curriculum for 1-4 grades is teaching fundamental movement skills. These skills are balancing movements, locomotor movements, manipulative movements and combined movements (MEB, 2012). The basic principle of movement education is "activity for each child, success for each child and with everybody's help". Movement education also helps improving physical fitness in children. (Abels, & Bridges, 2010). Therefore, priority for play and physical activity courses which are the most important elements in providing physical activity needs of elementary school children and in developing their physical fitness for their health, should be educating and preparing classroom teachers sufficiently and adequately equipped. Participating candidate teachers aimed to teach the codes primarily by using open-ended materials which will help them conducting this course in the future. Thus, this workshop was considered helpful for candidate classroom teachers to understand curriculum thoroughly and to comprehend how they can easily and economically design these materials which they would need for teaching those themes in the curriculum.

During the third phase of the workshop candidate classroom teachers were asked to find a partner and to produce a play and an activity with open ended materials. At the end of this work the candidate classroom teachers were asked to answer the question: *“What is the meaning and importance of the play/activity you and your pair produced in connection with process and product?”*. The answers of the candidate classroom teachers were: “producing fun activities and play”, “producing useful activities and play”, “co-operation”, “accomplish much work with restricted materials”, “increasing participation” and “using creativity”. Open-ended play is limited only to the imagination and unlimited thinking of individual. Participating candidate teachers emphasized that they were able to produce fun play and activities and accomplish much work with restricted materials by exchanging ideas and co-operating with their partners and by using their imagination. Many studies in literature have shown enjoyment of play/activity to be an important factor for children in participating. If they have enjoyed play/activity they continue participating (Motl, Dishman, Saunders, Dowda, Felton, & Pate 2001; Özcan, Mirzeoğlu, & Çoknaz, 2014; Wininger, & Pargman, 2003). Therefore it is an significant achievement for candidate teachers to believe in producing fun activities/play with open-ended materials regarding the efficiency of this course.

*What is the meaning and importance of paired work in connection with process and product?* was another question asked to candidate classroom teachers. The answers of the candidate classroom teachers were: “producing ideas together”, “increasing cooperation”, “solidarity”, “improving creativity”, “using time efficiently” and “trusting friend”. Candidate teachers in the study stated that they generated ideas together with their partners, they worked together and helped each other regarding the nature of work. Teachers constitute groups when they are performing in their profession and work together. In these processes, producing different ideas and being open to those ideas, trusting colleagues and using time effectively are qualities that all teachers should have. Having an opportunity to experience and improve these qualities through this workshop are the important indicators that this study realized its aim and candidate teachers achieved personal gains which will help them in their profession.

In phase eight, candidate classroom teachers were requested to form groups of four and produce an activity and a play by using open ended materials. Subsequently, they were asked in Reflection 3 paper: *What kind of benefits would open-ended materials provide for your future professional life?* The answers of the candidate classroom teachers were: “preparing class environment with less and limited materials”, “gaining creative features” and “being able to prepare a “fun” course”. All the answers to this question given by candidate classroom teachers are quite significant because conducting "Play and Physical Activities" course effectively in elementary school depends upon factors such as; knowledge and skills of the teacher, physical facilities and material availability of the school, number of students, climatic conditions and the functionality of the curriculum, etc. Yet, according to related studies some of the most important problems of the teachers in the physical education and sports classes are low student participation and the limited implementation of the existing programs originating from lack of course materials (Gülüm, & Bilir, 2011; Taşmektepligil, Yılmaz, İmamoğlu, & Kılıçgil, 2006). Therefore, appropriate educational environment should be provided to the future candidate teachers during their pre-service education to be able to develop solutions for future professional challenges they will come across. "Play and Physical Activities" course started to be implemented during the school year of 2012-2013 and there are no physical education teachers in elementary schools. This suggests that there is limited sport or play spaces and therefore our schools cannot provide sufficient materials for this course. For this reason there is a lot of work to be done for classroom teachers and their creativity. It is very important that candidate teachers in this study emphasized that they gained/improved these competences and they mentioned these competences as the most important achievements for their future profession. Also, seeing activities they create as “fun” is another important element which will increase student participation in their class in the future.



Another question asked to the candidate classroom teachers was “*Do you think that this workshop was useful for your personal development? How?*”. Almost all candidate classroom teachers answered the question which “yes” and they described this contribution as “understanding the developmental characteristics of students”, “improving creative thinking” and “using these kinds of experiences in their future profession”. Parallel to this question candidate classroom teachers were also asked to *give their opinions and recommendations about the workshop* and according to the answers the opinions were mostly positive. Many of the candidate teachers stated that they participated in the works they were asked to, they had fun and they were happy during those works. And they also reported that they could produce “fun” activity/play environment, use their creativity and this workshop was a guide for their future profession. In a play symposium in 2009, similar to this study conducted by pre-school teachers a number of participants reflected on the symposium’s powerful reminder that “learning through play is for all ages, not just for children” (Nell et al., 2011). According to the outcomes of the play symposiums teachers recognized the need for a change in their practice and have scheduled more time for play, increased use of open-ended materials and incorporated music in their classroom.

### **Conclusion and Recommendations**

Play and Physical Activities course should be conducted by classroom teachers effectively. This course includes healthy development, socialization and provision of physical activity needs depending on the age period of Turkish children especially between 6-9 years of age through “fun” games and physical activities. The main factor for the effectiveness of this course is the teacher to understand the importance and the structure of this course and meet the children’s needs of movement and fun by using existing facilities or by creating new ones. Through this workshop a new point of view was provided for classroom teacher candidates on play and physical activities based on their own past experiences. The candidate classroom teachers defined the open-ended materials as developing creativity, being useful, easy to find, safe/harmless but also as confusing. It is believed that this study contributed to classroom teacher candidates to establish personal and professional gains which were creativity, collaborating, effective communication, creating enjoyable educational environments, reflective thinking, goal setting, problem solving, using second hand materials for the aim of the course, etc. In addition, according to the participants this workshop was very successful and these kinds of workshops should be provided to all classroom teacher candidates.

Based on the findings of the workshop the following recommendations can be given:

1. Similar studies which involve the use of more enriched open-ended materials can be given to teacher candidates (classroom teachers, pre-school teachers and physical education teachers) who will be teaching physical education related courses at different school levels during their future profession.
2. Similar studies can be implemented for classroom teachers, pre-school teachers and physical education teachers who already practice their profession to create awareness about the curriculum they follow and to improve their personal and professional achievements

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