

## Creating Learning Environments in Preschool Classrooms: Perspectives of Pre-service Preschool Teachers

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### Abstract

The aim of the research is to determine pre-service preschool teachers' views on creating learning environments in preschool classrooms. Qualitative research methods were used in the research. The study group was composed of 35 pre-service preschool teachers. In this study, a semi-structured interview form was chosen as data collection tool. The data of the research was evaluated using content analysis. As a result of the research, pre-service preschool teachers stated that some physical and educational features should be taken into account while creating the learning environment. Pre-service preschool teachers also state that learning centers are the most important elements in the preschool learning environment. Pre-service preschool teachers consider the existence of learning centers to be important in preschool classroom. Also, pre-service preschool teachers stated that there are points to be considered while creating learning centers. In conclusion, pre-service preschool teachers have sufficient information about creating an effective learning environment.

**Keywords:** Learning Environment, Learning Centers, Early Childhood Education, Pre-service Teachers' View

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## INTRODUCTION

The pre-school period is a very critical for the development of children. In this critical period; the physical, socio-emotional, cognitive and language developments of children are shaped by the quality of their environment and learning experiences. Therefore, preschool education is based on meeting the children's educational needs with rich stimulating environmental opportunities which were suitable for their developmental levels.

A developmentally appropriate learning environment that meets children's developmental needs and capacities has positive effects on children's development (Maxwell, 2007; Sanoff, 1995; Stankovic & Stojic, 2007). In order to reach a quality education level, it is necessary to ensure the healthy growth of children with rich learning experiences and to support their development in all areas (MoNE, 2013). The concept of quality in preschool education services is determined depending on the quality in learning activities, the quality of interactions with teachers, peers, and materials (Pianta et al., 2005; Thomason & La Paro, 2009), physical environment qualities, group size, balance of child-teacher ratio and teacher qualifications (Howes et al., 2008; Thomason & La Paro, 2009; OECD, 2006).

Physical environment and resources, including the features and conditions of space, furniture, tools and materials, have a significant impact in supporting children's development. According to a research study examining the effects of physical environment on children, it is seen that the physical design and layout of preschool education environments have an impact on children's learning, behavior and creativity (Dearing et al., 2009). In addition, in an intercultural study on the quality of preschool education environments, the quality of learning conditions offered to children in preschool education varies depending on the physical conditions of the school (Sheridan, Giota, Han & Kwon, 2009).

A well-organized learning environment in preschool education causes more time for classroom interactions (OECD, 2006; UNESCO, 2005) and supports the development of children positively (Burchinal et al., 2000; Howes et al., 2008; Mashburn et al., 2008; Peisner-Feinberg et al., 2001; Sabol, Soliday Hong, Pianta & Burchinal; 2013). In this context, good arrange of the learning environment will be important for the development of children because the children are developing by being influenced by the environment.

When preschool education program in Turkey is examined; the program aims to ensuring children grow up healthy through rich learning experiences. The program has been developed in order to ensure that children's development reaches the highest level in the fields of motor, socio-emotional, language and cognitive development. Also, enabling children to be ready for primary school by gaining self-care skills is one of the other important goals of the program (MoNE, 2013). In general, it is aimed to support the multidimensional development of children in preschool education. In addition to this, the learning environment should also support children's development in order for children to reach these developmental goals specified in the program. Considering the developmental goals in all area included in MoNE 2013 Preschool Education Program; it will be important to create a learning environment that will enable the child to develop skills such as fine and gross motor skills, creative thinking skills, ability for empathy, attention skills, remembering skills, scientific thinking skills.

It is important to create a physical environment that meets the educational needs of children in preschool educational institutions in order to support the child's development in all area. A well-designed physical environment in education will support children's active learning experiences and develop creative problem-solving skills (Moore, 1987). In this context, a physically careful and attentive planned physical environment in education gains importance in terms of achieving the goals in the program. Especially in preschool learning environments, learning centers, which will be created in the classroom environment, have a particular importance in achieving the goals set in the program.

Learning centers are defined as areas that are separated by various materials (cabinets/shelves, panels, carpets of different colors, floorings or tapes attached to the floor, etc.). These centers contain different and various materials selected in accordance with the objectives of program and children can work individually or as a group in these centers (Beaty, 2013; Diffily, Donaldson & Sassman, 2001; MoNE, 2013; Pool & Carter, 2011; Prevost, 2003). In the simplest terms, learning centers can be considered as places in classroom where learning activities and experiences take place (Sanoff, 1995).

The physical environment created through learning centers in preschool classroom helps meet children's educational needs by working individually or as a group. Especially considering the significant impact of the learning environment on the socio-emotional, physical and cognitive development of children (Bekman, 1982; Burchinal & Cryer, 2003; Ceglowski & Bacigalupa, 2002; Feyman, 2006; Kağıtçıbaşı, Sunar & Bekman, 1988; Yalçın, 2011); learning centers are an important issue in creating a learning environment. In this regard, it is seen that many studies have been carried out regarding the opinions of teachers, who have an important role in the creation and use of learning environment, about the organization and use of the learning centers (Aysu & Aral, 2016; Çakır, 2011; Durmuşoğlu, 2008; Erşan, 2011; Ögelman, 2014; Ögelman & Karakuzu, 2016; Özyürek & Aydoğan, 2011; Parlakyıldız & Aydın, 2004; Tu, 2006; Ulutaş & Demiriz, 2006; Öncü Celebi, 2015, 2017; Yoleri & Tetik, 2018). When all these study findings are examined, it is seen that teacher has an important role in creating an effective learning environment. It was observed that the related researches were generally carried out with teachers and that there was no study about this issue with pre-service teachers. Accordingly, it is aimed in this study to determine the opinions of pre-service preschool teachers, who are future preschool teachers, about creating a learning environment. As the teacher of the future, revealing the opinions of them on this subject is important in terms of revealing the competence of the pre-service teachers on this subject. For this reason, the aim of this research is to determine the pre-service teachers' opinions about creating a learning environment in preschool classroom. Within the framework of this main purpose, seeks to answer the following research questions:

1. What are the characteristics that the learning environment should have in preschool education in terms of preservice preschool teachers'?
2. What is the importance of learning centers?
3. What are the points to consider when planning learning centers?
4. What are the aims of using learning centers?

## **METHOD**

### **Research Design**

In the research, qualitative research design was preferred in order to find out what pre-service preschool teachers' opinions about creating a learning environment. Hereby, instead of generalizing the results to a wider population, the qualitative research design provides a more detailed examination of the perspectives of a selected sample group on the subject of the study. In addition, the qualitative research design provides the researcher flexibility in the process of recognizing and interpreting the participants' understanding (Patton, 2014).

### **Study Group**

The study group of the research consists of 35 pre-service preschool teachers (n=33 women, n=2 men). In the study group, all participants are senior students studying in pre-school education program of a public university in Turkey. Participants were preferred to be senior students in order to have a longer-term experience in undergraduate education and teaching practice.

## Research Instruments and Procedures

The data were collected by using qualitative data collection methods because of the need to obtain in-depth information about the research topic. In this research, semi-structured interview questions were used as data collection tool. Semi-structured interview was preferred because it is a convenient way to obtain data to reveal different perspectives of the participants on a particular subject.

The following steps were following while preparing the semi-structured interview form to be used as the data collection tool in this study: Firstly, following the literature review, semi-structured interview questions were prepared by the researcher. Secondly, the semi-structured interview questions shared with 2 experts in the field in order to ensure reliability. Thirdly interview form was organized according to the feedback received from the experts. Fourthly this interview form was first tested through pilot interviews with 2 preschool teachers. Finally, in line with the feedback obtained from the pilot interviews, the interview form was finalized and the data of the research started to be collected. The interview form consists of 6 open-ended questions.

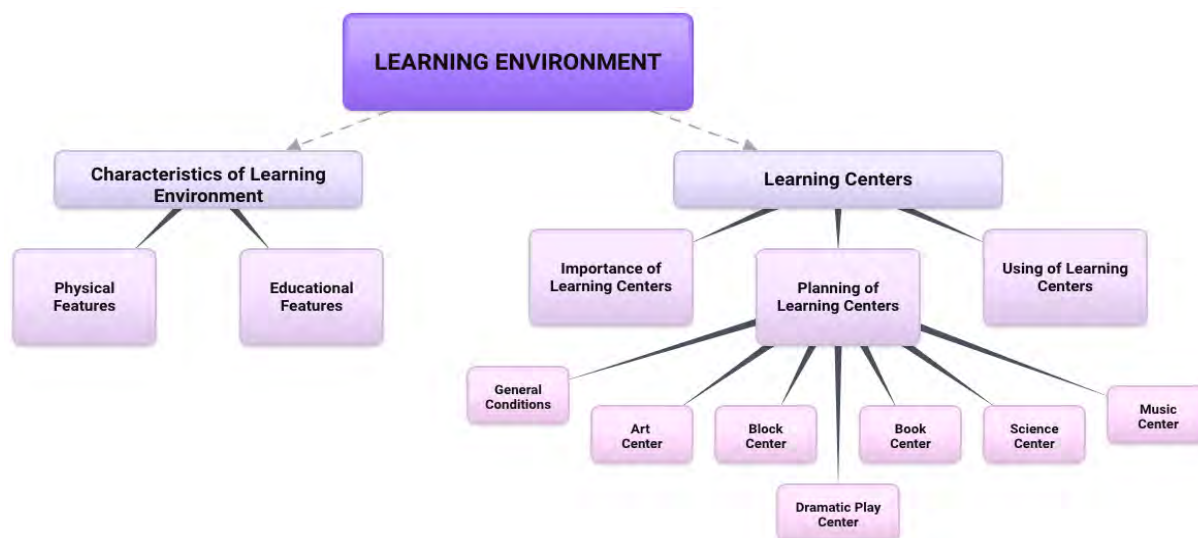
Before starting interviews with participants, participants were informed about the research subject, objectives, and their rights in the research process. Following this notification, the participant's confirmation about voluntarily participated in this interview was obtained. Then, six open-ended questions designed to determine the opinions of the participants about creating a learning environment in preschool classroom are presented. The duration of the interviews ranged between 15 minutes and 25 minutes. At the end of each interview, the voice recordings were transcribed using MS Word software by the researcher on a daily basis. Data collection process was completed between 22 October 2020 and 5 November 2020.

## Data Analysis

The data obtained from the interviews were analyzed through the content analysis method. Accordingly, data are analyzed in four phases: Firstly, at the end of each interview, the interview records transcriptions written daily by the researcher were combined. Secondly, the interview transcript obtained were carefully read and broad categories were created (Wellington, 2000). Thirdly, the interview transcript was read again and it was checked whether there were any parts that were not included in the categories and then the main themes of the research were listed. In the last step, sub-themes were created by evaluating the data under each theme within itself. At the end of the data analysis, the data were reported under five sub-themes under two main themes, and important parts of the participants' views were cited to support the findings. Pseudonyms as P1 (participant 1), P2 (participant 1) etc. are used in these citations.

## FINDINGS

The themes and sub-themes resulting from the content analysis applied to the data obtained from the interviews with participants are given in Figure 2. The findings obtained in this study consisted of the main themes of *Characteristics of Learning Environment* and *Learning Centers* under the category of learning environment. In this context, the theme of the characteristics of the learning environment includes *physical and educational features* sub-themes. The theme of the learning centers covers *importance of learning centers*, *planning of learning centers* and *using of learning centers* sub-themes. The planning of learning centers sub-theme consists of *general conditions*, *art center*, *block center*, *dramatic play center*, *book center*, *science center* and *music center* sub-themes.



**Figure 1: Themes and sub-themes based on content analysis**

### **Characteristics of Learning Environment Theme**

Participants considered that the learning environment must have certain features in order to support the child's all-round development in the educational environment. While participants stated the features that the learning environment should have, they mentioned some of the physical and educational features of the learning environment.

**Physical features.** Participants think that the learning environment should primarily contain concrete materials of diversity and richness that address children's senses (seeing, hearing, touching, etc.). Participants expressed these opinions such as: *"The learning environment should be equipped with rich and diverse materials that support the creativity, curiosity and all areas of development of the child."* (P5), *"There should be a variety of sufficient materials in the learning centers. These materials should be of a variety that can stimulate all the senses of children."* (P8), *"There should be materials to support children's imagination and creativity."* (P10), *"There should be concrete materials to improve children's learning. In addition, different materials that will support children's creativity should be offered to the child."* (P11) and *"It is important that existence of material in the classroom environment, as children use their senses in the learning process during this period. Various and rich materials for different senses such as seeing and touching should be present in the classroom."* (P23).

In addition, participants emphasized that these materials in the learning environment should be appropriate for the age and development level of children and that these materials should be safe for the health of the children. Participants expressed that such as: *"The materials in the learning centers should be appropriate for the age and development levels of the children. It should be suitable and safe for child health."* (P3) and *"Materials that are appropriate for children's development levels and ages should be available."* (P12).

According to participants' opinions, materials should be placed in a learning environment in an easily accessible way for children. With the following views, participant stated that children could be encouraged to make free and independent choices in the learning environment: *"Learning environment should include learning centers. All learning centers should be included to support the development of the child. A slippery floor should not be preferred in learning environment. The materials should be diverse and rich to suit the level of children's development and should be placed in a learning environment so that children can access it independently. Thus, children can work independently without the need for adult assistance."* (P1) and *"The classroom environment should be*

*designed so that the child can easily reach all learning centers. This situation enables the child to act independently in the classroom environment.” (P18).*

Moreover, participants think that the learning environment should be of adequate size, clean, tidy and have appropriate qualifications in terms of features such as temperature, light, sound and ventilation. Participants expressed these opinions such as: *“Learning environment should be in a way to attract the attention of preschool children; it should be bright, spacious and airy. The classroom should be sufficiently wide. In addition, the classroom should be safe for children. There should be large boards where children can hang up their activities.” (P5), “It is important to design the learning environment by considering the physical characteristics of the children. Stimulants such as temperature, light and sound should be taken into consideration.” (P4), “The learning environment should consist of rich materials, but it should not be too crowded and mixed. It should be tidy. There should not be more stimulants and confusion in the environment.” (P9), “The environment should be suitable for both individually and collaboratively work. The environment should be arranged accordingly. The furniture like as table, chair etc. must be suitable for the physical structures of the children.” (P13) and “The class should be very clean and tidy. Everything should be in place.” (P24).*

There are also examples of opinions of participants that it is important that classroom furniture (table, chair, etc.) is suitable for children's physical properties and can be moved when necessary. Participants' opinion examples on this subject are as follows: *“Furniture should be suitable for the physical structure of the child. The furniture like chair and table in the classroom environment must be movable. There should be different kinds of furniture suitable for group and individual works.” (P8), “The physical environment of the classroom should be comfortable, safe and adaptable to changes.” (P14) and “The learning environment should be designed to support comfortable movement.” (P21).*

Additionally, with the following views, participants stated that there should be various learning centers in the learning environment in order to diversify children's learning experiences: *“All learning centers should be located in a classroom setting. Materials in learning centers should be appropriate and safe for children's health.” (P2), “In the classroom setting, there should be learning centers separated from each other by using tools such as cabinets and floor bands.” (P6) and “In the learning environment, there should be learning centers first. These learning centers should have a diverse and sufficient number of materials.” (P30).*

Finally, with the following views, participants pointed out that the learning environment should be created in an integrated manner with technology: *“There must be materials to support children's imagination and creativity. Learning of children should be extended by using technological tools.” (P25) and “There must be an interactive whiteboard to provide children with a variety of visual and audio materials.” (P31).*

**Educational features.** Participants think that the learning environment in preschool education should have a quality that meets the individual differences, interests and needs of children. Participants expressed opinions such as: *“The learning environment should be designed in accordance with the individual differences and needs of children.” (P22), “The learning environment must respond to the children's interests and needs.” (P26), “The individual differences of the child should be taken into consideration while creating a learning environment.” (P29), “The learning environment must be in a way to attract children's interest and attention.” (P32), “The learning environment must have the quality to stimulate the child's interest and curiosity.” (P34) and “The learning environment should be appropriate for the children's interests, needs and development levels.” (P35).*

Participants consider that the preschool learning environment should meet the individual differences, interests and needs of children. One of the participants expresses this as *“Learning environment should be designed in accordance with the individual differences and needs of the child” (P12), many other participants expressed their opinions like as: “It must meet the interests and needs*

*of the child” (P7), “When the learning environment planned, the individual differences of the child should be taken into consideration” (P16), “It must be in a way to attract children's attention and attention” (P20), “It must have the quality to stimulate the child's interest and curiosity” (P27), “It should be appropriate for the interests, needs and development levels of the children” (P28) and “It should address the differences of children. It should be appropriate for their development.” (P33).*

In addition, participants emphasized that the learning environment should inspire curiosity in the child, present concrete learning experiences and support all areas of development of the child. Participants expressed opinions such as: *“It must be of a quality to support the child's development. It should be arouse curiosity and keep her curiosity alive.” (P1), “It should provide learning opportunities to support children's creativity, curiosity and development.” (P6) and “The child's interest and curiosity play a very important role in active learning, so the learning environment should stimulate the child's sense of curiosity.” (P23).*

Participants defined an effective learning environment as an environment where children can express themselves comfortably and freely. With the following views, participants stated that the learning environment must enables children to participate actively in the learning process: *“An environment where children can feel comfortable should be provided, so that children should be able to express their thoughts easily.” (P15), “The learning environment should be an environment where the child can be free. Because the child will be more creative, more independent and more productive in a free environment.” (P22) and “The child should be actively learned by trying and observing. So, we have to design active learning processes in learning environment.” (P26).*

Finally, with the following views, participants emphasized the importance of creating an effective learning environment by including both individual and group activities in different types of activities in line with educational goals: *“The learning environment should help children get skills such as communication, cooperation and sharing. For this, it is necessary to include group activities in learning process as well as individual activities.” (P17) and “The learning environment should be sufficient physically for group and individual activities. The child should be able to work comfortably in environment both in the group and on his own. The environment should be arranged accordingly for this.” (P29).*

### **Learning Centers Theme**

Participants stated that there should be various learning centers in the learning environment in order to diversify children learning experiences. When these statements of them about learning centers are examined, it is seen that participants have various ideas about the importance, planning and using of learning centers.

**The importance of learning centers.** Participants think that learning centers offer different life experiences to children and support all development areas of children. Their opinions are as follows that learning centers support children development: *“Learning centers are important for the development of the child in various developmental area and to provide them with a suitable environment.” (P19), “Children can find opportunities for their development through different experiences in learning centers.” (P21), “Learning centers support all development areas of children by helping children to gain different experience, to establish natural relationships with peer in smaller groups, to solve problems they encounter during play, to take decisions and responsibilities, and to express themselves.” (P25) and “Learning centers and the variety of materials in these centers support the all-round development of children. For this reason, it is important to establish different learning centers in the classroom environment.” (P32).*

Participants stated that children also had the opportunity to develop various skills and abilities in line with their interests and needs in learning centers. In this regard, with the following views, participants think that learning centers that allow children to discover and express themselves in

different ways and it is also important for teachers to create new opportunities to develop children interests and potentials: *“Learning centers is important for the development and increase of children's interests.”* (P3) and *“Learning centers allows the child to discover himself and his interests. In addition, it is ensured that they have knowledge about different fields such as books, music and science.”* (P13).

Participants emphasized that the interests and potentials of children can be discovered in the activities in learning centers. In addition, it was observed that they think that learning centers are important in terms of activating the curiosity in the child and enabling them to obtain information from different sources. Participants expressed opinions such as: *“Learning centers enable children to discover themselves in different environments. In addition, as teachers, we enable us to see the direction of children's interests and thus support their development in this direction.”* (P9), *“Learning centers are areas that support children's curiosity, interest and development. The child can find different information and activities to support his development in each center.”* (P20), *“Learning centers play an important role in meeting children's curiosity.”* (P24) and *“During this period, children need rich stimulants as they develop rapidly. These stimulants are mostly found in learning centers. This means that learning centers are environments where important activities that support the development of the child and arouse curiosity.”* (P28).

Participants think that knowledge is embodied in learning experiences realized with the use of materials in learning centers and therefore consider learning centers are important. In addition to being a place where knowledge is embodied, learning centers are effective in creating an active learning environment that provides children with the opportunity to learn by doing and experiencing. Participants expressed that such as: *“Children need to learn some concepts at an early age. The best way to embody these concepts is to use learning centers. For example, when talking with children about our body, the teacher can use the body model in the science center. So, the children can see this visually. Thus, embodied learning can be achieved.”* (P19), *“Learning centers support children to learn by doing and experiencing by providing a comfortable working environment.”* (P27) and *“Learning centers help us create an active learning environment based on the theory of multiple intelligences. Different learning centers reveal different interests and abilities.”* (P30).

Participants think that different groups of children have the opportunity to work together in learning centers. Thus, with the following views, participants express that children's social skills such as initiating and maintaining communication, helping, sharing, waiting their turn and cooperation will be supported: *“Learning centers enable the child to do both individual and group work. Thus, learning centers supports communication skills of children.”* (P2), *“Learning centers provide an environment where children with individual differences can come together and express themselves. Thus, children's communication skills improve and they learn by socializing.”* (P11) and *“In learning centers, children learn to playing cooperatively with peers, helping each other, sharing, and waiting their turn. Thus, learning centers ensure the development of children's social skills.”* (P18).

Finally, with the following views, it was observed that participants stated that the development of scientific thinking, problem solving and creative thinking skills in children could be supported through learning centers: *“Learning centers develop children's creativity.”* (P14), *“Learning centers enable children to develop different perspectives.”* (P17), *“Learning centers allows children to play in the field they want by improving their creativity. Thanks to the learning centers, children develop their creativity by turning to the centers as desired.”* (P31) and *“Learning centers are important because the children have fun while playing games in these areas, on the other hand, they develop their imagination by constructing something with the tools and equipment in these centers, their thinking skills are developed and they learn by doing and living.”* (P34).

**Planning of learning centers.** Participants stated that some general points should be considered in the planning of learning centers. In addition, participants think that in learning centers



(art center, block center, dramatic game center, book center, science center and music center) some special conditions should be considered depending on the characteristics of the learning centers.

**General conditions.** Participants stated that learning centers should be planned in a way that meets the interests and needs of children in accordance with their development levels. Also, participants considered planning and reorganizing learning centers in accordance with the educational objectives as significant. Although it is seen that participants emphasize that learning centers should have a remarkable design, they think that learning centers should have a sufficient variety of materials that will stimulate children's curiosity and creativity. Participants stated that while planning the learning centers, taking the necessary safety precautions, being sure to make a point of being clean, hygienic and tidy, and ensuring that the furniture is suitable for the physical characteristics of the children are also should be taken into consideration. Finally, participants stated that physical conditions of the classroom should be taken into consideration when determining the number of learning centers to be established in the classroom. Participants stated that the requirements of the activities such as noisy or quiet, and wet or dry should be taken into account when determining the locations of learning centers. It is seen that participants also stated that the learning centers created in the classroom environment should be separated from each other with various materials. Participants expressed that such as: *"I organize the learning centers according to the interests and needs of the children. In this process, I also make a planning by considering the developmental characteristics of the children. Especially when choosing materials to be located in centers."* (P7), *"The arrangement of a learning center should base on the needs of the students and the gains to be addressed in the program. Again, as changing developmental needs of children, various arrangements must be made in the learning centers. Some materials can be added, some materials can be removed."* (P10), *"I would plan the learning centers arrestingly for children. In addition, I would pay attention that the materials in the center are of a quality that will stimulate children's creativity and sense of curiosity."* (P12), *"It is important that the furniture or materials in the learning center are suitable for children. Safe areas should be planned. Learning centers and materials must be in a certain order and must be clean."* (P15), *"I make sure that the furniture in the learning centers is suitable for the physical characteristics of the children. The materials should be placed in the centers at the eye level of the children. Thus, they can easily access the materials themselves. In addition, the height of the cabinets that separate the learning centers from each other must be suitable for the physical characteristics of the children. Thus, the child can easily observe the activities in other learning centers."* (P16), *"I decide how many learning centers will be established in the classroom, taking into account the physical characteristics of the classroom. Then, considering the developmental needs of the children, after deciding which centers I should make an arrangement, I would make an arrangement in the classroom environment according to the characteristics of the activities to be held in the centers."* (P33) and *"I try to separate each learning center from each other using various materials. I try to make sure that each learning center has its own boundaries."* (P35).

**Art center.** Participants stated that different and various art materials and activities should be presented at the art center. While emphasizing that art materials are safe for the health of the child, participants stated that there should be an exhibition area in this area besides various visual materials. In terms of size, it was stated that it would be appropriate to work both individually and collaboratively. Participants expressed opinions such as: *"In the art center, different and various materials should be presented to children to stimulate their creativity."* (P7), *"I would make sure that the paint materials used do not contain parabens. I would choose art materials that do not contain carcinogenic substances. I would also pay attention to the issue of cleaning of art center."* (P12), *"I would pay attention that there have tables that allow children to do group and individual activities."* (P20) and *"There should be areas where children can exhibit their studies"* (P21).

**Block center.** Participants emphasized that the block center should have a large area, and it was stated that blocks of different sizes, shapes, and colors should be present in this center. At the same time, with the following views, participants stated that it should be established in a place away from learning centers that require silence to work: *"First of all, block center should be included blocks*

*of different sizes and colors, and paying attention to be a large area.” (P23) and “It should be a large area and be created away from learning centers that require silence to work. There should be blocks of different size, shape, and color.” (P27)*

**Dramatic play center.** Participants stated that the dramatic play center should be established in a comfortable and wide area in the classroom and emphasized that puppets, costumes and accessories should be in this center in order to enrich children's play experiences. One of the participants expresses this as *“In this learning center, it is important to have the variety and sufficient material available for children to develop their games. For example, dolls of different skin colors, accessories such as women and men's dress-up clothes, and puppets. In addition, the center should be planned in a wide area and made more comfortable with furniture such as pillows and armchairs.” (P33).*

**Book center.** According to participants, the book center should be planned comfortably and interestingly in a brighter area of the classroom. In this center, it should be picture books, newspaper, magazine suitable for their ages and away from learning centers such as the block center where noisy activities are performed. Participants expressed opinions such as: *“The book center should have illustrated fairy tales and story books suitable for the ages of the children. In addition, different magazines and newspapers can be contained.” (P8) and “The books in the center should be suitable for the age group of children and should be an area where they can work quietly and comfortably. For this reason, it should be created in a bright part of the classroom and away from the learning centers where include noisy activities.” (P17).*

**Science center.** With the following views, participants stated that science center should be planning as a center where children can feel themselves as scientists, with costumes and materials, various information sources (brochures, illustrated atlas, etc.) and models (human body, etc.): *“There should be experiment tools, various science books, journals that will not harm the child.” (P1), “All kinds of materials that help the child to examine, observe and experiment should be included.” (P5) and “It should be in the form of a small laboratory with materials that help them to conduct experiments and research. In addition, I try to make the children feel like scientists by wearing costumes such as white coats.” (P16).*

**Music center.** With the following views, participants think that the music center should be established as a center with different and various musical instruments and various visual stimulants (notation pictures, etc.), away from the centers where silent studies will be done: *“I would organize it as a center with music instruments that can attract children's attention. I would establish in a place away from the learning centers where include noisy activities.” (P9) and “There should be a center where there are various music books and note books as well as musical instruments.” (P28).*

**Use of learning centers.** Participants stated that learning centers should be used effectively in order to meet the individual needs of children, to support their development and to reach the gains included in the education program. In addition, participants stated that learning centers can be used especially in concept instruction. Finally, it is seen that participants emphasized that learning centers should be updated at regular intervals to keep the centers alive. Participants expressed opinions such as: *“I would actively use these centers during playtime to meet the individual needs of children.” (P4), “I would organize the learning centers according to the outcomes of program. I would use the learning centers to support the development of children individually or with their peers.” (P10) and “In learning centers, I would not present all of the materials to the child at once. As time progressed, I would refresh the materials by add and subtract. Thus, I would keep the children's interest in the centers alive.” (P18).*

## CONCLUSION AND DISCUSSION

In this study, the views of pre-service preschool teachers about creating a learning environment were examined. The pre-service preschool teachers defined the learning environment as

an environment have some physical and educational qualities. In addition, all of them stated that the most important element that creates the learning environment in the preschool classroom is learning centers.

When the opinions of the participants on creating a learning environment are examined, it is seen that they emphasize that the learning environment should primarily contain diverse and rich materials. Literature indicates that pre-school education programs draw attention to this situation. It is stated that the pre-school education programs should be offer diverse and rich materials that supply different vital experiences to children in the learning environment (Beaty, 2013; Diffily et al., 2001, MoNE, 2013). At the same time, it is seen that the participants stated that the materials should be placed in the learning environment in a way that children can easily reach in the study. In the relevant literature, it is stated that the learning environment should be a flexible and reliable area that allows children to move freely (Demiriz, Karadağ & Ulutaş, 2003). In addition, according to the participants, the learning environment should be adequate size, clean, tidy and have appropriate qualifications in terms of features such as temperature, light, sound and ventilation. Similar to this finding of the study, Aksoy (2009) emphasizes that the learning environment should be clean and to have a suitable temperature, sufficient light and ventilation. In addition to this, a well-organized learning environment positively affects children's development and enables children to learn better and develop positive behaviors (Abbas & Othman, 2011; Maxwell & Chmielewski, 2008, Riedler & Eryaman, 2016).

When the opinions of the participants on the educational features of the learning environment should have a quality that meets the individual differences, interests and needs of children. Literature demonstrates that the learning environment should arouse the curiosity of children, make them active and provide opportunities for them to express themselves. In the pre-school education program, it is stated that a well-organized learning environment should be designed according to the needs of children in order to increase their development opportunities (MoNE, 2013). In order to create a conducive environment for teaching and learning, the physical properties of the classroom should be used effectively and a learning environment that activates the child's learning process should be created (Shaari & Ahmad, 2016). The learning environment should be created in a way that meets the educational needs of children and provides opportunities for effective learning (MoNE, 2013). Considering that especially preschool children are curious, questioning and researcher, educational environments that will support their development in this direction should be created (Beaty, 1988). The learning environment should support multi-directional thinking and ensure that children benefit from education at the highest level (Özdemir, Bacanlı & Sözer; 2007; MoNE, 2013).

Another prominent view expressed by the participants is that there should be various learning centers in the learning environment in order to diversify the learning experiences of children. The preschool education program shows that the learning environment should be organized to include learning centers in order to support children's development (MoNE, 2013). In addition, in the pre-school education program, learning centers are expressed as necessary areas for the education program to be planned and implemented in accordance with its purpose (MoNE, 2013). As a matter of fact, the learning centers provide children with experiences of making choices, working with others, engaging in hands-on activities and active learning (Sanoff, 1995). The studies in the literature show that the learning centers support children's language development by enabling them to interact with others. Also, children can develop their reading and writing skills by using the materials in the learning centers symbolically. In addition, while children are using the learning centers, they have the opportunity to exhibit skills such as queuing and sharing in order to develop appropriate social relationships with each other, and thus the use of learning centers supports children to establish games in a collaborative way. Children have the opportunity to develop their skills in activities they enjoy and find meaningful, and their creativity is supported through open-ended activities they experience in learning centers (Isbell, 1995; Isbell & Exelby, 2001; Isbell & Isbell, 2003). In this sense, learning centers not only provide children with opportunities to explore, try and construct their own knowledge, but also provide children with freedom of movement, socialization, choice, responsibility and problem-solving opportunities (Bottini & Grossman, 2012).

In addition, according to the participants, learning centers should be organized in accordance with the objectives in the educational program. Learning centers should be planned in a way that is interesting, attractive and stimulates creativity. Also, the participants stated that the physical conditions of the classroom should be taken into account when determining the number of learning centers to be established in the classroom, and when determining the locations of learning centers, they stated that the requirements of the activities such as noisy or quiet, and wet or dry should be taken into account. Moreover, it is seen that they also stated that the learning centers created in the classroom environment should be separated from each other by various materials. When the relevant literature on the planning of learning centers is examined, it is seen that the opinions expressed by the participants are among the things that should be considered. Literature indicates that while organizing learning centers, some characteristic features of the activities in learning center (such as noisy/quiet, and wet/dry) should be taken into consideration (MoNE, 2013; Sanoff, 1995). In addition, while organizing learning centers, the physical characteristics of the classroom and the number of children should be taken into account, and should be arranged according to the individual needs and interests of the children (Çakır, 2011; MoNE, 2013; Null & Sima, 2000; Ömeroğlu-Turan & Turan, 1998). The flexibility principle should be considered when creating learning centers to enable children to create appropriate interactions and develop new learning experiences in line with their changing interests (Çakır, 2011; Diffily et al., 2001; Knopf & Welsh, 2010; MoNE, 2013; Poyraz & Dere, 2001). Learning centers should be updated as adding new materials, removing some materials, and replacing some of them in accordance with the objectives of educational program (Diffily et al., 2001; Lundgren, 1998; MoNE, 2013; Moyer, 2001; Stephens, 1996; West 2011). Thus, children's interest in learning centers can be kept alive.

As a result, when the opinions of the participants about creating a learning environment are examined, it is seen that all of them expressed their opinions about creating a learning environment in the interior. Considering the opinions expressed about creating an indoor learning environment, it can be thought that the participants have sufficient knowledge about creating an effective learning environment. However, it is a striking finding that the participants did not present an opinion on the creation and use of the outdoor space, which has an important place in pre-school education. Outdoor spaces in pre-school education institutions are an important issue that should be handled as an extension of indoor space. The participants' only expressing their opinions about creating a learning environment in the interior may be due to their insufficient knowledge about outdoor use.

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