

PERCEPTIONS OF PRESERVICE PRESCHOOL TEACHERS ON CONCEPT OF CREATIVITY

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Abstract. The aim of this study is to determine perceptions of preservice preschool teachers on concept of creativity. Sixty preservice preschool teachers were included in the study conducted with the qualitative research design. In the first stage of the data collection process, the preservice preschool teachers were asked to define creativity. In the second stage, they were asked to explain the concept of creativity by drawing a picture. They were allowed to write explanations on their pictures about what they had drawn. The data of the study included definitions and pictures made by the preservice preschool teachers. Content analysis method was employed to analyse the data. The findings of the study indicated that preservice preschool teachers emphasised that an individual should have some personality traits to exhibit creativity, they reflected this on the pictures they drew, they highlighted that a person's creative ideas during the creativity process should be at most original, they also reflected the creativity process on their pictures they drew, they declared that a creative product should have an original and functional/useful quality, they reflected creativity as the ability to produce a functional (useful) and original product on the pictures they drew for the creative product, and they stated that the environmental features supporting the formation of creativity should be free and natural without any limitation, restriction and direction.

Keywords: content analysis, creativity, perception, preschool education, preservice preschool teachers.

Introduction

Numerous theorists and researchers have endeavoured to explain what creativity is and how it emerges and develops from their own perspectives. Each theorist's perspective on creativity is different; therefore, there are various definitions of creativity, as well. Being an abstract concept, creativity has many characteristics that make it difficult to define. For this reason, creativity has more than one definition and explanation. While some theorists state that creativity is the process of creating a new product by making some additions based on existing knowledge, some others consider creativity as the process of creating a unique product that has never been discovered before (Karlıdağ & Gönen, 2019).

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Guilford (1950) defines creativity as a process including factors such as fastidiousness towards problems, fluency, mental flexibility, analysis and redefinition of skills, complexity and elaboration. Being one of these factors in the creativity process, fluency is the ability to generate a large number of ideas in a very short time. Flexibility is the ability to generate several different approaches to solve a problem. Redefinition includes the ability to use a known object for the purpose of another function. Complexity refers to the ability to consider the presence of more than one variable while solving a problem (Guilford, 1950).

Torrance (1993) defines creativity as the ability to find knowledge deficiencies, search for solutions, and develop and test hypotheses. Researchers who have evaluated the concept of creativity through creative thinking skill define creativity as being open to experience and differences, being tolerant of uncertainty, being able to focus and take responsibility (Urban, 1991), being motivated towards something new (Collins & Amabile, 1999), and the ability to identify the problem situation, determine knowledge deficiencies, redefine the situation and solve it by exceeding the limits (Hee Kim, 2006).

According to Mayesky (2003), creativity has two different parts: one of them is originality including imagination, playing with ideas and discovering as well as noticing the problem and planning for the solution of the problem. The other one is the creative processes in which learned skills such as writing, playing an instrument, and composing are used.

According to Butcher and Niec (2005), creativity is related to a way of thinking that includes three different cognitive processes. The first cognitive process is divergent thinking, which is the ability to generate multiple solutions against a problem. The second cognitive process is transformation that refers to the ability to show flexibility in thinking and find new solutions to problems. The third cognitive process is evaluative thinking that refers to the ability to evaluate potential solutions while and after solving a problem.

Mindham (2005) states that creativity cannot be definitely defined and is affected by numerous variables and personal traits. Creativity is the ability to look at objects in a different perspective, to associate previous knowledge with the present and the future, to think beyond stereotypes, to generate original ideas, to use non-traditional approaches to solve problems and to create a unique and original product (Mindham, 2005).

Rhodes (1961) tried to establish a model to define creativity. He evaluated various definitions of creativity as from the 1950s and revealed that creativity is addressed from four perspectives, instead of suggesting a single definition for creativity. He stated that some creativity studies focused on the traits of the creative personality (person), some others on the creativity process (process), some on the characteristics of the creative product (product), and some on the quality of the environment (pressure) that allows the formation of creativity. Rhodes (1961) also stated that these four different perspectives, he called the 4P's (person, process, press and product) of creativity, are not actually mutually exclusive, but are overlapped or intertwined. These four terms in Rhodes' approach are explained below (Dimov, 2007).

The studies lasting for years have accepted within the scope of the term *person* that creativity is a structure forming entirely in one's own mind (intrapersonal). The genius is responsible for "creating" and the personality of the person is seen as the outlet for creativity. This definition turns into a problem when it is adapted for children. It is necessary to examine the characteristics (such as spontaneity, openness, extraversion, and liveliness) that can be

regarded as the pioneer of later creative achievements, rather than directly telling whether or not children have “creative” personality traits. However, it is very difficult to say that the mentioned traits are stable in children under the age of five (Glăveanu, 2011). In fact, when many examples are considered, it is required for the person to receive a long-term education in the field where the person is called creative and to form an infrastructure.

Perception, thinking, learning or interaction of the individual are the basic components of the “process” dimension (Uzun, 2019). The process is aimed at figuring out the mental mechanism that occurs during the creative thinking (Kozbelt et al., 2010). The creative process is different from information processing theory. This is because there are more factors affecting the cognitive mechanism in this process. For example, numerous variables affect the process such as the effect of the conscious and subconscious levels, psychological and environmental factors (Özaşkın & Bacanak, 2016). The creative process is a series of thoughts and actions, such as the useful product that ends in a novel (Lubart, 2001).

The term of *product* refers to the transmission of thoughts to other people through words, pictures or different materials (paint, clay, metal, stone, fabric, etc.) (Rhodes, 1961). A creative product is as original as the distance between the knowledge existing prior to the product and the product itself. The greater the distance, the more original the product will be. Also, creative products are unique and novel and surprise the beholders and pique their curiosity. In this context, the products created by children can be categorized as creative. The ways children in early childhood illustrate the world especially in preschool age is a constant source of astonishment and pleasure for parents and teachers. They have “fresh” point of views, are “brave” to detach from reality, and “easily” ignore social orders. This indicates that their products are magnificent examples of what truly creativity means to children (Glăveanu, 2011). It can be asserted that the most important step of creativity is the product. Basic and most important point of creativity, which is shown among the 21st century skills, is solving complex problems and reaching the product. Particularly in the business world, complex problem solving, creativity, entrepreneurship and innovation are at the top of the list of important product-oriented skills that are very often mentioned (Karabay & Yürümezoğlu, 2015).

Dimov (2007) noted that one of the benefits of using a creativity perspective when examining opportunities is the relevance of creative products. The product component of creativity focuses on the results of the creative process (Runco, 2004). It has already been noted that various opportunity development concepts include multiple outcomes such as business concepts, business models, and business plans (Ardichvili et al., 2003). These are forms of creative products.

The term of *environment* refers to the relationship between people and their circle. People have different backgrounds or cultures, show different needs for the expression of creativity, and can be motivated by different environmental stimuli (Wong & Pang, 2003). Each idea is uniquely reflected on conditioning the creator’s self, sensory qualification, mentality, value systems, and daily life experiences. Each person perceives their environment uniquely (Rhodes, 1961).

The value system and culture of the creativity environment influence both the process, the person and the product. Social and psychological processes are involved in different stages

of the creative process and culture affects these social and psychological processes and thus indirectly the results of the creative process (Chiu & Kwan, 2010). Mainstream psychology often sees the social one as an external factor and the society influences the thoughts and behaviours of the individual. Society puts certain “environment” and directs individuals. Children also make an effort to adapt to the society and are affected by the society during this process (Glăveanu, 2011).

Basically, the individual constantly interacts with the environment, either formally or widely. However, this interaction level is important for the effectiveness of creative performance. The economic wealth of the environment should not be confused with the rich environment. It is important that there is an environment including problems which will make the individual willing to solve them in a suitable area. In other words, the rich environment is the area where the individual will encounter a lot of different problems and naturally reach the desire to solve the problems concerning his/her area of interest (Karabey & Yürümezoğlu, 2015).

As explained above, when Rhodes (1961) created the 4P’s model to define creativity years ago, he also called for: “Now is the time for every teacher to become more creative!”. In fact, what he said is valid for all times. “Being creative” is a “must” especially for preschool teachers. Because preschool teachers witness the period during which children develop the fastest in all aspects. In this period, which is also very important in terms of unleashing and supporting creativity, it is a desirable situation for children to encounter with creative teachers. For this reason, it is significant to know the perceptions of preservice preschool teachers on creativity. Thus, their creativity characteristics can be stimulated and improved. Based on this point of view, one way of directing preservice preschool teachers towards creativity may be drawing their attention to how they perceive creativity. There is a need for studies that figure out teachers’ perceptions on creativity in depth. Because this is closely related to both the educational background of teachers and the general discourse of creativity in education. Understanding correctly teachers’ perceptions of creativity is crucial in order to know the application of how to effectively integrate creativity into class.

According to Torrance (1987), teachers need to create teaching environments, where the mind can push its limits, in order to train creative children. In order to develop creativity, it is crucial for teachers to prepare an environment that is inspiring and guiding children to produce new things by making them think more (Töremen, 2003), follow their steps at every stage, work with them, and encourage them in their success. Creative teachers are able to manage to develop creativity and create appropriate creative learning environments (Gültekin, 2004). While the teacher can improve children’s creativity, they can also improve their self-confidence and academic knowledge, because the teacher can maximize the benefits of creativity in the classroom (Kaufman & Beghetto, 2013). According to some authors, creative teachers provide a learning opportunity with a high probability of perceiving uncertainty and failure for creative effort by taking both risks and exhibiting their own creative interactions (Halpin, 2003). In his study, Broinowski (2018) examined the quality of the preschool education program and the creativity levels of teachers and determined that there is a positive correlation between the intuition and imagination of the preschool teacher and the creativity and imagination of the children, and also a quality preschool education program. The creativity

ability of the educator is the most important factor in enriching the educational life of the children. However, the Sali (2019) examined the creativity and empathic skills of preschool teachers and classroom teachers in a study titled "Examination of Teachers' Creativity and Empathic Abilities in Terms of Some Variables". At the end of the study, it was seen that the creativity and empathy scores of the preschool teachers were higher than the creativity and empathy scores of the classroom teachers. In this context, the aim of this research is to examine the creativity definitions of pre-school teacher candidates, considering that they have taken creativity lessons throughout a term. In this study, it was aimed to directly determine the perceptions of the participants about the concept of creativity by obtaining detailed data and to reveal the current situation. Within the framework of this main purpose, answers to the following questions were sought:

- 1) How pre-school teacher candidates express the creative personality traits in the pictures they draw and the definitions they make?
- 2) How pre-school teacher candidates express the creative process in the pictures they draw and the definitions they make?
- 3) How pre-school teacher candidates express the characteristics of the creative product in the pictures they draw and the definitions they make?
- 4) How pre-school teacher candidates express the environmental features that support the creativity in the pictures they draw and the definitions they make?

Additionally, it has been seen that the relationship between the creative thinking skill levels of preschool teachers and pre-school teachers candidates and some factors that may affect creative thinking in teachers and teacher candidates (Karaçelik, 2009), the relationship between creativity and problem-solving levels of preschool teaching students (Zeytun, 2010), the creativity of preschool teachers and primary school teachers and their students (Sali & Köksal Akyol, 2015), the creativity and empathetic skills of preschool teachers and classroom teachers (Sali, 2019), teachers' opinions on creativity (Fryer & Collings, 1991), understanding of prospective classroom teachers about creativity in mathematics (Bolden et al., 2010), teacher candidates' sense about creativity in primary school (Newton & Beverton, 2012), and teachers' sense about creativity in primary music classroom (Kokotsaki, 2012) have been investigated in the literature. There has been no study examining the creativity perceptions of preservice preschool teachers. From this point of view, it is thought that this study examining the creativity perceptions of preservice preschool teachers based on Rhodes' model would contribute to the literature.

1. Method

1.1. Design

This study, investigating the perceptions of preservice preschool teachers about the concept of creativity, was conducted with qualitative research model. Qualitative research model is defined as a research model in which individuals' thoughts, behaviours and beliefs on a certain subject are tried to be explained in a realistic and integrated way in natural environment by using qualitative data collection methods (Quinn Patton, 2014; Şimşek & Yıldırım, 2013).

1.2. Sample group

While determining the sample group within the scope of the study, convenience sampling from purposeful sampling methods among the non-probability sampling types was used. Accordingly, the sample group consisted of 60 undergraduate students ($n = 54$ females, $n = 6$ males) who were studying in the third year of the preschool teaching undergraduate program.

1.3. Data collection tool

The data were obtained through the documents prepared by the participants. These documents were obtained in line with the appropriate instructions given by the researchers to the preservice preschool teachers. The documents of the study were composed of texts and pictures prepared by the participants. In order for the information obtained from the data collection tools to support each other, data were collected from the participants in two different ways, both text and pictures.

1.4. Data collection process

The data collection process includes three stages in total. In the first stage, preservice preschool teachers were informed about the study and they participated in the study voluntarily. At this stage, preservice preschool teachers were also provided to fill out the demographic information form. At the second stage, a blank sheet of paper was distributed to each of the preservice preschool teachers and they were asked to define creativity with their own words. At the last stage, preservice preschool teachers were asked to explain the concept of creativity by drawing a picture. At this stage, they were allowed to write explanations about what they drew on their pictures. The data collection process was terminated after all of the participants completed their drawings.

Within the scope of research ethics, preservice preschool teachers were informed about the study and their voluntary participation in the research was guaranteed through the voluntary participation consent form. In addition, the researchers did not share the personal data collected about the participants during the research except for the purpose of the research. Participant views and picture samples obtained as a result of the research were also presented using pseudonyms (P1, P2, *etc.*) in order to protect the identities of the participants.

1.5. Data analysis

Content analysis method, one of the qualitative research methods, was used to analyse the data obtained in this study. In content analysis, similar data are brought together within the framework of certain concepts and themes, organized, and interpreted in a certain consistency (Quinn Patton, 2014). In this context, the definitions of the preservice preschool teachers regarding creativity and the pictures they drew were examined one by one. Based on the examination, a list of codes regarding the perceptions of preservice preschool teachers on the concept of creativity was prepared. Then, the situations related to each other in this list of codes were determined and gathered under certain categories. These categories are creative personality traits, creative process, creative product, and the environment allowing

the formation of creativity. The validity and reliability of the study were tried to be ensured by paying attention to the analysis of the evaluated documents based on the consensus of the researchers (Creswell & Miller, 2000).

2. Results

Figure 1 shows the themes and sub-themes that emerged as a result of the content analysis applied to the data obtained as a result of the study. The findings obtained in this study consisted of the main themes of creative personality traits, creativity process, creative product and environment that allows the formation of creativity under the category of creativity.

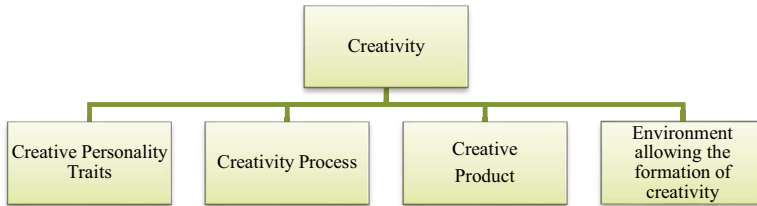


Figure 1. Creativity (source: created by authors)

2.1. Creative personality traits

When the creativity perceptions of the preservice preschool teachers were examined, it was observed that they emphasised that the individual should have some personality traits in order to exhibit creativity. According to the preservice preschool teachers, personality traits of being able to develop a different perspective ($n = 32$), having a vivid imagination ($n = 6$), being able to think freely ($n = 4$), being courageous ($n = 4$), being self-confident ($n = 3$), being ambitious ($n = 3$), being open-minded ($n = 2$), being risk taker ($n = 1$), being curious ($n = 1$), and being deep thinker ($n = 1$) were important for creativity (Table 1).

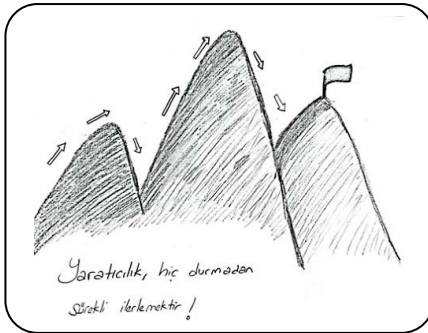
Table 1. Creative personality traits according to the preservice preschool teachers (source: created by authors)

Theme	Codes	Frequency
Creative personality traits	Able to develop a different perspective	32
	Vivid imagination	6
	Able to think freely	4
	Courageous	4
	Self-confident	3
	Ambitious	3
	Open-minded	2
	Deep thinker	1
	Risk taker	1
	Curious	1

Sample definitions of preservice preschool teachers for creative personality traits are as follows:

- “Creativity is the ability to see, hear, and feel what others cannot or it is the original modification of existing objects and thoughts” (P2);
- “Creativity is the ability to see differently the same object that everyone is looking at, to think differently and deeply; to be able to interpret events, situations and objects originally. Creativity is to have the ability to produce novel things” (P3);
- “Creativity is fearlessly and courageously walking towards the sun, hearing colors and seeing sounds along an endless road” (P11);
- “It means being courageous to express ideas that have never been said, trying things that have never been done, reaching unfinished conclusions, looking at the world differently” (P12);
- “Creativity is to look at an event, situation, object from more than one point of view and to choose the most original, newest and most different one and present it freely” (P14);
- “The creative individual exhibits traits such as being self-confident, independent, adventurer, and dreamer, and thinking unusually” (P59);
- “Creativity is the one’s creating a new product or idea by using his/her imagination, tools or other materials” (P33);
- “It sometimes means facing the world, struggling, and fighting, but not to giving up no matter what” (P52).

Sample pictures drawn by the preservice preschool teachers regarding the creative personality traits are as follows (Figure 2).



Picture 1 (P10)

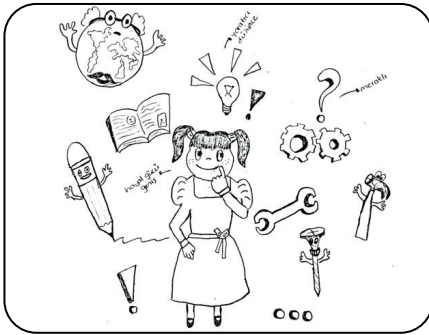


Picture 2 (P35)

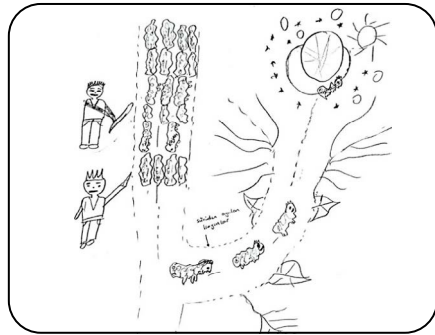


Picture 3 (P15)

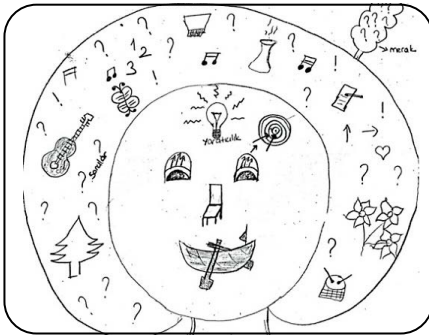
Figure 2. To be continued



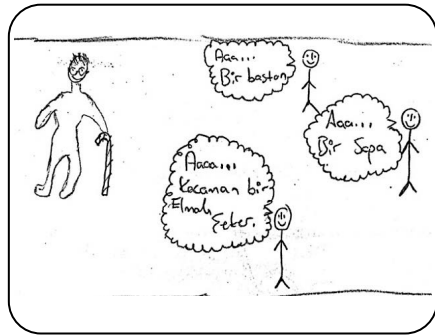
Picture 4 (P12)



Picture 5 (P32)



Picture 6 (P55)



Picture 7 (P60)

Figure 2. Creative personality traits in preservice preschool teachers' drawings
(source: created by authors)

When the pictures drawn by the preservice preschool teachers were examined, it was observed that they reflected some of the personality traits necessary for an individual to be creative. For example, while ambitious personality was emphasized in Picture 1 (Figure 2), imagination was emphasized in Pictures 2–4 (Figure 2). In addition, the curious personality trait was expressed in Pictures 4 and 6 (Figure 2). In Pictures 5 and 7 (Figure 2), developing different perspectives was emphasized.

2.2. Creativity process

According to the preservice preschool teachers, creative thinking or action occurs within a certain thinking process. While examining the data of this sub-category, evaluations were made during creativity process by examining generation of a large number of ideas, arrangement of works and production as “fluent”, looking at events from different angles and putting forward various ideas as “flexible” and creating something that no one could reach, discover, produce, think or do before. revealing something as “original”. The preservice preschool teachers highlighted that the creative thought that one puts forward during the creativity process should be the most original ($n = 37$). In addition, they stated that the creative thinking suggested the person during the creativity process should be flexible ($n = 29$) and fluent ($n = 5$) (Table 2).

Table 2. Creativity process according to the preservice preschool teachers (source: created by authors)

Theme	Codes	Frequency
Creativity process	Fluent	5
	Flexible	29
	Original	37

Sample definitions of the preservice preschool teachers concerning the creativity process are as follows:

- “It is the ability to think unlimitedly and endlessly, to be open to the new, and to do what has never been done before without being subject to any limitation, restriction or direction. It is recognizing the unrecognized” (P6);
- “As the phrase goes, it means looking at life in not three but rather an infinite number of dimensions” (P31);
- “Creativity is creating new unlimited, subjective, and constructive products. Also when we happen to be a difficult situation, it means finding solutions [...] or having alternatives” (P41);
- “It is the process of introducing a new concept, thought, or object, whilst hearing and seeing what no one else has before” (P8);
- “Creativity refers to a person’s ability to view events and situations from a different angle. It is seeing, hearing, and feeling what one else does” (P16);
- “An individual looks at a common object from an angle that no one else has. That is creativity” (P40);
- “Creativity is being able to think outside the box” (P5);
- “Creativity means to create something new by framing an emotion, thought, or concept into different situations, in different ways, with originality, clarity and flexibility” (P17);
- “Creativity is being original and going beyond what already exists” (P23);
- “It is the whole of one’s own original ideas and behaviours in the face of an event or situation” (P47);
- “It means to create something new and original by bringing together things that are known but considered to be unnecessary” (P50).

Sample pictures drawn by the preservice preschool teachers for the creativity process are as follows (Figure 3).

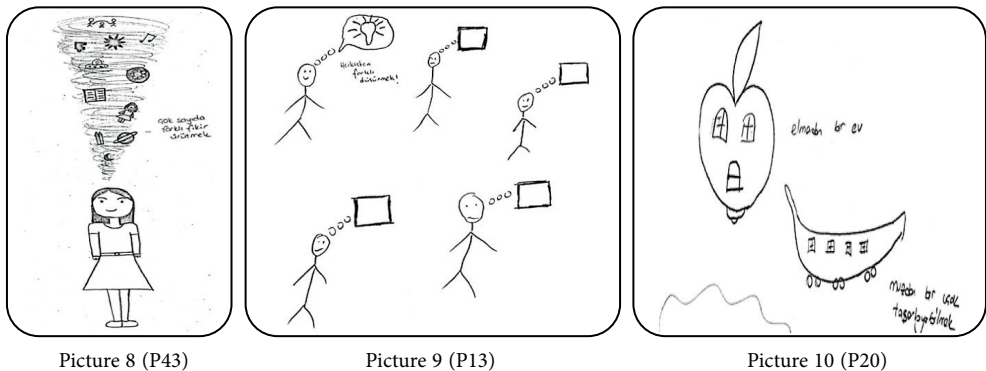


Figure 3. Creative process in preservice preschool teachers’ drawings (source: created by authors)

When the pictures drawn by the preservice preschool teachers were examined, it was observed that they reflected the creativity process on their pictures. For example, creativity was illustrated as the process of generating many ideas in Picture 8 (Figure 3), thus it was emphasized and creativity is a fluid process. Likewise in Picture 9 (Figure 3), creativity was illustrated as thinking differently from everyone else, so that creativity was emphasised to be a flexible process. Also in Picture 10 (Figure 3), creativity was depicted as a process of creating a product that has not been done and thought before so it was emphasised that creativity is an original process.

2.3. Creative product

According to the preservice preschool teachers, it is an important issue for a creative product to have some properties characteristics. According to the preservice preschool teachers, a product should have an original ($n = 35$) and functional/useful ($n = 4$) quality in order for a product to be creative (Table 3).

Table 3. Creative product according to the preservice preschool teachers (source: created by authors)

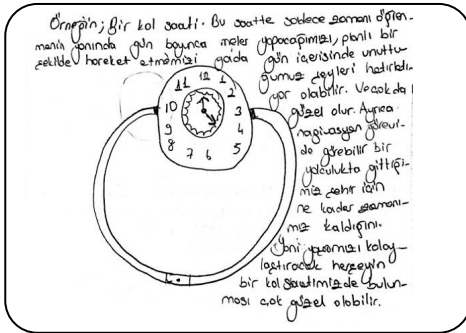
Theme	Codes	Frequency
Creative product	Functional/useful	5
	Original	35

Sample definitions of the preservice preschool teachers for the creative product are as follows:

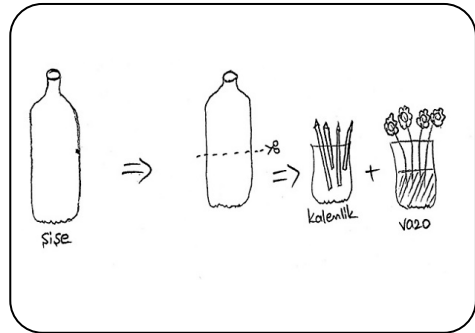
- “Creativity means come up with something that is out of the ordinary and even great and also functional when you see it – using imagination and intelligence by combining different elements to solve any problem or task needing to be done” (P1);
- “It is finding the most unique and practical way on the chosen path to reach the best and the most beautiful” (P14);
- “Creativity shapes our materials. It means to create new things and new materials to serve us” (P44);
- “Creativity is being able to think outside the box, put forward original ideas, and do what no else has dared to do before. It also is being able to debunk stereotypes, come up with original ideas, and be brave enough to implement those ideas” (P13);
- “Creativity is creating something new by re-shaping what one already has” (P48);
- “Creativity means presenting a different new object, phenomenon, or idea by means of (re)structuring and processing pre-existing objects, events, and thoughts. It is the ability to create a new and original object from one that already exists” (P51);
- “Creativity is when an individual looks at an existing situation, event, problem, complaint or any taboo through a different perspective, comes forth with a new perspective or solution, or discovers something new from schemas in their minds” (P60).

Sample pictures drawn by the preservice preschool teachers for the creative product are as follows (Figure 4).

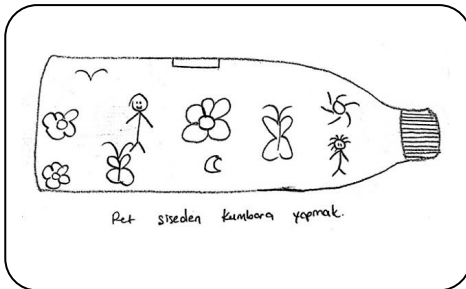
When the pictures drawn by the preservice preschool teachers were examined, it was observed that they drew pictures related to the creative product. When their pictures on creative product were analysed, it was determined that they reflected creativity as the ability to cre-



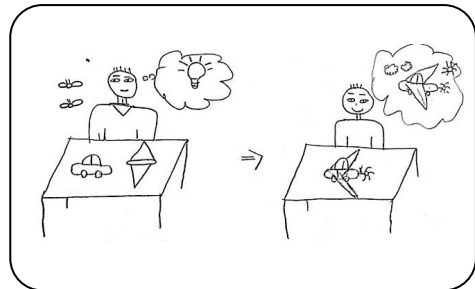
Picture 11 (P4)



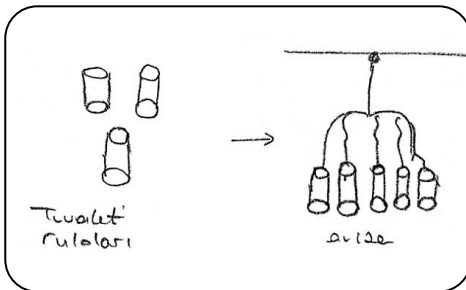
Picture 12 (P44)



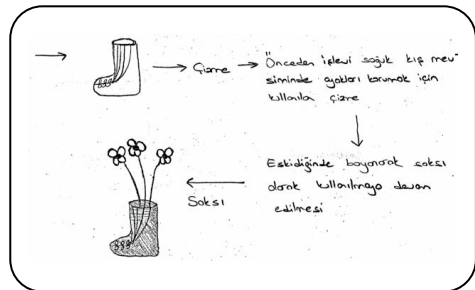
Picture 13 (P47)



Picture 14 (P48)



Picture 15 (P50)



Picture 16 (P51)

Figure 4. Creative product in preservice preschool teachers' drawings (source: created by authors)

ate a functional (useful) and original product. As seen in the sample pictures, creativity was reflected as the process of creating an original and functional product based on the current knowledge (Pictures 11–16) (Figure 4). There are examples showing the transformation of a plastic bottle into a piggy bank in Picture 13 (Figure 4), a toilet roll turning into a chandelier in Picture 15, and an unused boot turning into a flower pot in Picture 16 (Figure 4). As understood from these examples, the participants define creativity as the process of creating a functional (useful) and original product.

2.4. Environment allowing the formation of creativity

The preservice preschool teachers stated that the environment also has an effect on the formation of creativity. They expressed the characteristics of environment allowing the formation

Table 4. The environment allowing the formation of creativity according to preservice preschool teachers (source: created by authors)

Theme	Codes	Frequency
Characteristics of environment allowing the formation of creativity	Free	4
	Natural	1

of creativity as free without restriction, limitation and direction ($n = 4$) and natural ($n = 1$) (Table 4). Based on the pictures drawn by the preservice preschool teachers, it was observed that there were no their sample picture reflecting the characteristics of environment allowing the formation of creativity.

Sample definitions of the preservice preschool teachers regarding characteristics of environment allowing the formation of creativity are as follows:

- "It is the ability to think unlimitedly and endlessly, to be open to the new, and to do what has never been done before without being subject to any limitation, restriction or direction. It is recognizing the unrecognized" (P6);
- "It is freedom without borders" (P9);
- "Creativity is the expression of one's own thoughts and feelings in a natural setting without being under anyone else's influence or pressure" (P26);
- "Creativity is the free-spirited works that an individual creates without any obstacles whatsoever" (P53).

Discussion, conclusions, and recommendations

The findings of this study, examining the perceptions of the preservice preschool teachers regarding the concept of creativity, are summarized below under the titles of creative personality traits, creativity process, creative product the environment allowing the formation of creativity under the category of creativity.

Creative personality traits

The results of the study, when the creativity perceptions of the preservice preschool teachers were examined, it was seen that they emphasised that the individual should have some personality traits in order for creativity to emerge. According to the preservice preschool teachers, it has been seen that the personality traits of being able to develop a different perspective, having a vivid imagination, thinking freely, courageous, self-confident, ambitious, open-minded, risk takers, being curious and deep thinker have an important place in the formation of creativity.

When the pictures drawn by the participants were examined, it was observed that the ambitious personality structure, imagination, and developing different perspectives were emphasized and the curious personality trait was tried to be expressed. In the study conducted Runco et al. (1998), to examine the factors affecting the development of creativity according to the participant's view, the participants stated that personality traits such as motivational behaviours, problem-solving and questioning tendencies, cognitive and innovative, curious, sensitive, willing, and positive thinking are effective in the development of creativity. they

have done. When the related literature was examined, the personality of the individual is emphasized in the development of creativity, and even the personality of the individual is seen as the starting point of creativity (Glăveanu, 2011). Maslow (1959) states that the word creativity can be used not only for products but also for the characteristics, activities, processes and attitudes of individuals (Maslow, 1959; Sungur, 1997).

Creativity process

It was observed that the preservice preschool teachers emphasized that the creative thought that the person put forward during the creativity process should be the most original. In addition, the creative thought that the person puts forward in the creativity process should be flexible and fluent.

It was observed that preservice preschool teachers reflect the creativity process on their pictures. For example, creativity was emphasized as a fluent process by illustrating it as a process of generating many ideas, a flexible process by illustrating it as thinking differently from everyone else, and as an original process by illustrating it as the process of creating a product that has not been done and thought before. In the literature, the creative process is expressed as a series of thoughts and actions that lead to original and appropriate productions (Lubart, 2001; Lubart et al., 2015). Creative thinking skills are expressed as the ability of people to look from different perspectives, go beyond the given knowledge and limits, think outside the box, do something original, and combine seemingly irrelevant things to create something new (Torrance & Goff, 1989).

Creative product

The preservice preschool teachers stated that it is an important issue for a creative product to have some features. According to what they said, it was determined that a creative product should have an original and functional/useful quality.

Their pictures indicated that they drew pictures related to the creative product and they reflected creativity as the ability to create a functional (useful) and original product in their pictures related to the creative product. In the sample pictures, it was determined that creativity was reflected as the process of creating an original and functional product based on current knowledge. In another study, it was determined that teacher candidates considered creativity as the process of generating different, extraordinary and original products and they assessed originality and innovation as the characteristics of creativity (Şahin Zeteroğlu et al., 2012). In the literature, the original product is highlighted in the definitions of creativity. For instance, Sternberg and Lubart (2004) defined creativity as the ability to produce a useful and original product and assessed creativity as individual creativity (such as solving daily problems) and social creativity (creating a new art movement, revealing a new scientific finding).

Environment allowing the formation of creativity

According to the preservice preschool teachers, the environment also has an effect on the formation of creativity. They stated that the characteristics of the environment that supports the formation of creativity should be natural and free without restriction, limitation and direction. In another study, teacher candidates stated that “not restricting individuals, setting

them free and creating a free environment” were necessary for creativity (Şahin Zeteroğlu et al., 2012). In a study, it was determined that personal and cultural beliefs influenced teachers’ perceptions about their creativity (Mullet et al., 2016). Likewise, in the study by Runco et al. (1998), the participants stated that cultural and social characteristics as well as family and early life experiences had an effect on the development of creativity. It is also emphasized in the literature that suitable environments and conditions should be provided to develop creativity and these environments should not be restrictive, coercive or over-structured (Dirim, 2002; Kağıtçıbaşı & Özgediz, 1979; Önder, 2003). Creativity is an important feature whose development should be supported by providing appropriate environments as from the early periods of the childhood. Revealing and developing creativity characteristics is directly associated with the environment encouraging creativity and showing the best examples. In this sense, the importance of the school and classroom environment and the teacher, which is the most effective on the child after parents, is undeniable (Töremen, 2003).

When the pictures drawn by the preservice preschool teachers were examined, it was observed that there were no sample pictures that reflected the characteristics of environment allowing the formation of creativity. It was thought that the participants did not draw pictures on this subject, since it might have been challenging to concretise the cultural and social environment characteristics, which have an abstract quality, through painting.

In summary, when the perceptions of preservice preschool teachers on the concept of creativity were examined, it was observed that they emphasised various personality traits related to creativity, creativity process, creative product and environmental characteristics that affect the formation of creativity. When the relevant literature is examined, creativity is a complex concept that develops depending on cognitive, physical, personal and social tendencies (Albert & Runco, 1988; MacKinnon, 1962; Mumford & Gustafson, 1988). Creativity occurs when personality traits, creative process, product, and environment interact with each other as a whole (MacKinnon, 1962). In other words, creativity forms depending on individual characteristics such as personality, temperament, habits, attitude and value system, as well as mental processes such as motivation, perception and thinking, and the interaction of individuals with their environment. Creativity does not belong to a specific cognitive, emotional, social or physical domain, but it is addressed as a concept that benefits from each other.

Creativity has become a very popular subject in education and business life in recent years; therefore, it has an important place in understanding correctly the creativity perceptions of teachers, how to include creativity in classrooms effectively and how to apply creativity effectively in classrooms. In this context, future studies may use different research methodologies to test the generality of the findings of this study. For this purpose, qualitative and quantitative studies can be planned together for a deeper understanding of the perception of creativity. Furthermore, different opinions can be obtained by comparing the different groups to be included in the sample group. In the context of the study subject, it is recommended to conduct future studies examining how the perception of creativity affects creative behaviours. Similarly, it is suggested to investigate the relationship between teachers’ perception of creativity and their creative applications in the classroom.

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