Early childhood student-teachers' perspectives on creativity

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The changes taking place during the pandemic regarding the interchange between online and face-to-face teaching in the Department of Education of an Eastern Mediterranean private university, led to the need of instructors not only to revisit knowledge on creativity but to examine the views and perceptions of early childhood student-teachers about creativity. More specifically, through informal interviews, we examined 15 junior early childhood student-teachers' beliefs concerning creativity in general and the traits of a creative individual, whether creativity can be developed in education, and how it could contribute to early childhood teachers' professional development. In this article, we summarize a qualitative descriptive study that took place in the context of the course Designing Activities in Kindergarten and describe the results from the semi-structured interviews that aimed to find out early childhood student-teachers' views on creativity providing evidence for the participants' need for a framework and strategy to guide their creative instructional design and teaching.

KEYWORDS

creativity, creative instructional design, creative teaching, creative individuals, student-teachers' view

Introduction

In the Renaissance creativity might have been considered a luxury of a few but, as Csikszentmihaly (2006) pointed out, our species has developed to the point that creativity is now necessary for everyone. De Bono (1992) argued that "there is no doubt that creativity is the most important human resource of all. Without creativity, there would be no progress, and we would be forever repeating the same patterns" (p. 169). Creative thinking together with critical thinking, communication and collaboration are considered essential skills that should be develop in education to enable young individuals to respond productively to the challenges of the 21st century.

Guilford (1950) was among the first researchers to discuss the importance of creativity in children's intellectual, educational, and talent development, which, as a behavior, could be expressed as ingenuity, composition, and design. According to Torrance (1962), creativity is a thinking process that helps individuals deal methodically with the various problems and difficulties that they encounter and achieve original solutions. Therefore, creative thinking

contributes to social as well as personal progress. Studies on creativity in the 1960s and 1970s focused mainly on divergent thinking, which as Plucker et al. (2004) point out, contributes but is not synonymous to creativity. Creativity has also been studied in relation to imagination. Robinson (2011) considers creativity a form of applied imagination and a process of developing new ideas and putting them into practice to achieve innovation. However, creative production requires purposeful planning and focused work, fueled by knowledge, control and skill.

Recent consideration of creativity emphasizes the dialectical relationship of the individual with the environment for the development of this phenomenon. Plucker et al. (2004) consider creativity to be the interaction between ability, process, and environment with which the individual or a group produces a perceived product that is socially defined as new and useful. According to Csikszentmihalyi (1996), Creativity, with a capital C, is "a process by which a symbolic domain in a culture is changed" (p.8). The Creative person has strong knowledge of a domain and has connections with the field. However, it is impossible for children to learn a domain and know the field to the point that they could produce something that will change the culture and as Csikszentmihalyi (1996) continues, it is also impossible to tell whether a child will be Creative or not by basing one's judgment on his or her early talents. The author assumes that each person has, potentially, all the psychic energy he/she needs to lead a creative life. In education, creativity, as a group of personal qualities, an interpersonal and intrapersonal process, and an original product with high quality and intrinsic importance, should be examined in relation with the individual experiences of the creator, the social context, and the product.

The role of teachers in the development of children's creativity is decisive. As Saracho (2002) points out, teachers can promote young children's creative thinking skills and encourage them to endure their creativity by providing a learning context that contributes to the prospect of developing related skills. Educational programs and curriculums emphasize stimulating problem-solving, imagination, reflection, and curiosity to promote children's creativity. The Australian Curriculum Assessment and Reporting Authority (2019), for example, states specifically that creative thinking involves students learning to generate and apply new ideas in specific contexts, seeing existing situations in a new way, identifying alternative explanations, and seeing or making new links that generate a positive outcome. Beghetto (2017) emphasizes that if we want our students to take risks and respond creatively to every challenge, we must show them the way. Pllana (2019) who studied and elaborated on several facts about creativity in 21st-century educational reforms in six countries (United States, India, Chile, Mexico, China, Singapore), found out that creativity is significant to every educational system, despite the dissimilarities in implementing creativity. However, countries that include creativity in their curriculum, may not use it in the classrooms at all. Developing creativity does not require adding extra time for that in the curriculum, instead it requires from teachers to utilize time differently. Despite the clarity of any skill or behavior mentioned in national curriculums, applications of

programs for developing creativity depends on teachers' own understandings and interests in this area.

Eddles-Hirsch et al. (2020) provide examples on how to develop creativity by using models and strategies that have been found in the research to be effective evidence based frameworks that foster creativity in an inclusive classroom context. Dominey (2021) conducted research both inside and outside the classroom to explore the relationship between imaginative play and creativity in education and more specifically, to examine the structures, approaches, benefits, and obstacles related to imaginative play and creativity. One of the conclusions from her study was that an individual's creativity is intertwined with the environment and the challenges deriving from it (Dominey, 2021). Teachers have an integral role in setting or transforming the environment as educational context, therefore, they play a key role in cultivating students' creativity. Makris et al. (2021) stressed the important role of teachers in the development of creativity as a conclusion from a research study conducted through a survey that was distributed among primary school music teachers in Cyprus to define their perceptions regarding creativity.

Based on the general acknowledgement of the important role of teachers in developing children's creativity, the authors of this article and instructors in an early childhood education program of a Department of Education at a private Eastern European university, considered important to find out what were their students' thoughts and beliefs about creativity and creative teaching. Before adopting a teaching approach for our courses to promote creativity during a specific semester, we decided to investigate specific students' views on creativity without attempting to generalize our conclusions to the general population of the university student-teachers. This article is a report of a study aiming to describe the perceptions of a group of 15 university early childhood student-teachers regarding creativity and creative teaching and what follows is a summarized description of the research process, results, and conclusions.

Methodology

This descriptive qualitative study was part of a general effort of instructors in the Department of Education of the University of Nicosia in Cyprus not only to revisit knowledge on creativity but to examine the views and perceptions of early childhood student-teachers about creativity. More specifically, we examined 15 junior early childhood student-teachers' beliefs concerning creativity in general and the traits of a creative individual, whether creativity can be developed in education, and how it could contribute to early childhood teachers' professional development.

The participants of this study were 15 students in their third year of studies in the program of early childhood education of the Department of Education. The 14 female students and one male student, with average age of 22 years, were enrolled in a required course of their program titled, Designing Activities in Kindergarten, in the context of which this study took place. This group of participants was selected specifically because they had all completed

the first two courses of their school practicum, through which they had the opportunity to observe and apply educational theories and issues from the national curriculum into practice. Each students' practicum took place at a different school, and the experiences they accumulated from their visits might differ, however during their group meetings at the university, cases from all schools were discussed. The instructor leading the school practicum was the instructor of the course in which the study described in this article took place and verified through student-teachers' practicum portfolios that all participants of this study were familiar with a preschool environment, how a lesson is usually carried out in a preschool classroom and how the school space is organized in local preschools. It was the researchers' belief that the previously acquired knowledge on the context and process of teaching should not be considered a limitation for the study and could enable the participants of this study to have formed an opinion on what creativity is and could be in the preschool classroom. Apart from a similar school experience, the participants of this study also had similar grade-point-average ranging between 2 and 3, which was also considered a factor limiting external variables affecting the process (Mertens, 2008; Mertens and Wilson, 2019).

The student-teachers were interviewed, and their responses were recorded and analyzed using qualitative content analysis. Descriptive qualitative research draws its epistemological and ontological assumptions from philosophical and theoretical currents with a common core of fundamental assumptions considering social reality as a complex symbolic construction produced, reproduced, and transformed through the interactions of subjects (Lincoln and Denzin, 2005). As Eisner (2005) points out, researchers who adopt qualitative research approaches, study a situation as an experience, interview, observe, describe, take notes, and try to present and interpret the phenomena exactly as they are. Based on this perspective, the researchers and instructors at the university where this study took place, studied the views on creativity of a specific group of early childhood student-teachers in the context of a course that one of the researchers taught during a semester.

Semi-structured individual interviews were the tools for collecting data about early childhood student-teachers' perspectives on creativity. Through the interview we sought an interactive relationship of researcher and interviewees (Cohen et al., 2007; Cremin et al., 2011). Although there were predetermined questions, the interviewees could freely express their opinions by having a dialog with the researcher. There was also flexibility in the order and in the wording of the questions depending on the interviewee and the progress of the discussion in order to facilitate conversation and encourage student-teachers to express deep and clear positions and opinions. Student-teachers were also given the opportunity to ask for clarifications for any of the interview questions any time they felt the need to do so. The main interview questions focused on a general framework related to creativity with the aim to explore student-teachers' perceptions of creativity in general and the type of persons they considered to be creative. Additionally, the question whether creativity can

be developed was raised and how it could help early childhood teachers in their work. The main questions were the following:

- What is creativity?
- Which people do you define as creative?
- Can creativity be developed?
- Can creativity help a kindergarten teacher in her/his lesson? How?
- Which type of instructional design do you consider creative?
- Which type of teaching do you consider creative?
- Can creativity help the kindergarten teacher in constructing instructional design? How?

The researchers transcribed the recorded interviews and examined the data based on thematic analysis (Braun and Clarke, 2006) following six phases involving: (1) reading and re-reading the transcribed interviews for familiarization with data and noting emerging ideas; (2) formulating potential codes for every student-teacher response; (3) identifying common key elements and patterns among student-teachers' responses and organizing them into emerging themes; (4) reviewing the emerging themes from each student-teacher's responses and examined the connections across all data to create a thematic web; (5) generating the results from student-teachers' responses to the interview questions and selecting representative examples as data extracts; (6) examining coherence among the presentations of the analysis of student-teachers' interviews, the study's research questions, and existing literature on creativity in education.

Results

Early childhood student-teachers' views on creativity in education

When asked how they perceived the idea of creativity, most student-teachers pointed out several qualities of thinking related to creativity. More specifically, they described creativity as a process related to originality of thought, coming up with unique ideas, imagination, and flexibility for adopting alternative perspectives in different contexts. However, they were unable to define these characteristics of creative individuals, give examples of applications and indicate in which cases in our lives they can be applied. Thus, when asked to be more specific and describe examples of cases when the above characteristics of creativity can be expressed and applied, most student-teachers focused on the field of visual arts and the process of creating visual aids and instructional material. Special emphasis was given to the relationship between creativity and imagination by student-teachers with statements such as, "creativity is imagination," or "creativity has to do with imagination." When asked whether people who imagine are also creative or not, student-teachers' responses were collectively positive.

Student-teachers expressed particular interest in discussing the view that creativity can be reflected in the visual aids used in kindergartens. They wondered whether preschool teachers who do not have rich visual aids, are not creative but they all connected creativity to the production of "nice" visual aids that motivate children's participation in education as they are appealing and esthetically pleasing. Of particular interest was Maria's opinion, who argued:

> Many times, student-teachers during their school practicum, make very nice visual aids and use them in only one lesson and one activity. Being able to transform your visuals or manage to create conditions to be able to use them in various lessons and different activities, is creativity.

According to the student-teachers, creativity is a skill that not all people can acquire and those who stand out in society for their creativity are the artists. Similarly, preschool teachers with an interest in the arts are those who are most likely to express creativity in the classroom.

Based on the above view, the idea whether creativity can be developed was further discussed. Six of the 15 students argued that it is possible for an individual to develop creative thinking, but people born with this ability will always outperform the rest. Only two student-teachers responded with certainty to the question whether individuals can learn to think and behave creatively, however, those two student-teachers could not be more specific about and explain how creativity could be developed. Among the participants in this study, three student-teachers argued that "it is difficult to develop creativity."

On the other hand, all student-teachers expressed the opinion that every child in preschool appears to be very creative because, as Andria explained, preschool children "do not easily compromise with pre-established norms and that's why they are creative and ready for new challenges." Also, Petros explained that young children are creative because "they do not think about whether others will like what they do or not, they feel free."

How does kindergarten teachers' creativity contribute to their instructional design?

Whereas the initial questions of student-teachers' interview targeted their opinions about the phenomenon of creativity in general, the discussion then focused on their views on the interrelation between creativity and teaching. All student-teachers expressed the belief that creativity can contribute positively to instructional design and application, stressing with absolute confidence that "creativity can undoubtedly help in teaching" and that "creative lessons stand out from the rest."

During the discussion, student-teachers were asked to be more specific by giving examples of how creativity would help construct teaching. In those cases, student-teachers focused on the

visual aids for teaching. More specifically, eight female student-teachers thought that a creative person could create "very nice," meaning esthetically pleasing, visual support material for their lessons, in the form of paintings or drawings on two-dimensional surfaces or three-dimensional crafted constructions. Student-teachers argued that creative teachers are able to produce esthetically pleasing visual aids, which draw children's attention and lead to effective teaching. Although the students could not give specific examples, they nevertheless argued during their interviews that creative preschool teachers manage to make lessons more interesting, resulting in children's enjoyment and active participation.

Eleni and Marina were the only student-teachers during the interviews who mentioned a connection between creativity and an aspect of teaching other than visual aids. They argued that people who are creative can design activities that are flexible and develop children's skills and curiosity. These two student-teachers referred to the type of activities that creative teachers apply in their classrooms which develop cognitive skills related to children's creative thinking.

Creative instructional design and teaching

The main questions of the interview were about the relationship between creativity and instructional design, since instructional design is a demanding, complex and of particular concern to student-teachers. In the question about which type of instructional design they consider creative, the majority of student-teachers did not think that there is any type of creative instructional design, but there is only creative teaching. Only three student-teachers agreed on the creativity of instructional design and pointed out that creative instructional design includes "original activities carried out in a playful way."

During the discussion, student-teachers expressed opinions and experiences mostly related to creative teaching. They all described examples of activities from preschool instruction they had the opportunity to observe during the first phase of their school practicum. They were very skeptical about describing an instructional design as creative, explaining that if the same lesson plan is applied by two different preschool teachers, the result will not be the same, so they viewed creativity mainly as a characteristic of the way instructional design is applied or curried out in the classroom. From their experiences in preschools, student-teachers described as creative activities those that were original, in which the preschool teachers assumed a role and brought life to the lesson.

Four female students considered the techniques they were taught or observed in preschools for utilizing children's story books in their teaching as opportunities for creative teaching. When asked whether all lessons that include analyzing storybooks with preschool children can be considered creative, all four student-teachers responded negatively. To the question of what

then distinguishes creative and non-creative activities, Eleni claimed that "creative teaching of children's storybooks and fairy tales includes narration, dramatization and theatre." Of particular interest was Nicole's opinion:

> …I have seen a very creative lesson based on a storybook when the preschool teacher adopted different roles and challenged the children to participate. The time passed without us noticing and the children were happy and immersed into the activities. I have observed a non-creative lesson based on a storybook where activities had no interest. But I think that when utilizing a fairy tale in teaching, you can achieve more creative teaching than in other subjects.

The majority of the early childhood student-teachers participating in this study believed that creative teaching encourages all children to participate and that creative activities are characterized by originality and playfulness, while doubting the existence of creative instructional design.

Discussion

The early childhood student-teachers participating in this study stressed the importance of visual aids in the preschool classroom and considered creative preschool teachers those who demonstrate highly developed artmaking skills in the production of esthetically pleasing visuals for their lessons. They believed that those preschool teachers could carry out creative teaching. Undoubtedly, visual aids in the preschool classroom are considered necessary to activate young children's attention and to practice teaching in a demonstrative, attractive, and efficient way, since young children learn through their senses based on the acquisition of direct experience (Edwards et al., 2011). However, the effectiveness of visual aids in the classroom depends not only on its esthetics, size, and variety, but in a greater degree, on the way it is used (MacNaughton and Williams, 2005). Creative thinking related to flexibility of thought during preschool teachers' planning and executing teaching and more specifically, their decision making about what resources to use and how to use them, is what would support and enhance young children's learning. Creative preschool teachers can bring a puppet to life and transform a piece of fabric into the ocean or a magic carpet to lift young children up in the air, objects which would otherwise be just lifeless objects abandoned in a corner of the classroom.

The early childhood student-teachers participating in this study, mistakenly, saw direct connections only between artmaking and creativity. Since creativity cuts across all areas and has to do with innovative making in all domains (Piirto, 2011; Beghetto and Sriraman, 2018), this finding alerted the researchers and instructors of the specific student-teachers about the need for general departmental efforts to present the cross-disciplinary importance of creative thinking to student-teachers. Guilford's original factors related to divergent production, such as sensitivity to problems, ideational fluency, flexibility of set, ideational novelty, synthesizing ability, analyzing ability, reorganizing ability, span of ideational structure, and evaluating ability, could be taught as thinking routines throughout early childhood student-teachers' training programs, targeting every individual student-teacher and not only those with personal interest in the arts. The defining role of university instructors and student-teachers' mentors in all areas of education toward this end is underlined by the results of this study. Early childhood student-teachers need guidance to expand their personal perspectives on creativity, transcending the narrow limits of plain accumulation of area knowledge.

A key conclusion from this study is student-teachers' need for a framework and strategy to guide them toward creative instructional design and teaching. This was evident in the statements of all the participating student-teachers who stated that they would like to be creative kindergarten teachers but wondered how they could achieve this. Student-teachers seemed very willing and eager to carry out creative lessons, but most of them said that to achieve creative teaching they would choose to repeat activities that they had seen and made an impression on them, activities observed either in preschools during their school practicum or in the context of courses at the university's education laboratory. Veon (2015) confirms that many teachers want to develop their creativity but need step-by-step guidance and practice. Further research is required on ways of scaffolding student-teachers' instructional design as a product of creative endeavor that includes combining and transforming observed activities to form an original lesson or shifting and refining ideas to discover new possibilities, with an emphasis on constructing meaningful instructional design for everyone involved.

Research up until lately generally has indicated a decline in creativity levels when children enter school (Beghetto and Sriraman, 2018). The role of teachers in developing creativity is decisive (Robinson, 2011) when their job is not to "teach lessons" but teach individuals, encouraging them to take risks without fear of error and paving the way for them to alternative ways of thinking. Cultivating creative thinking cannot be achieved as a separate area of the curriculum (Beghetto, 2017). Overcoming methods and teaching practices that focus on memorizing and reproducing information must be emphasized in any context seeking 21st century skill development and reform. There is a need for developing creative and innovative learning contexts in higher education for future teachers that would ignite their creativity in order to facilitate all student-teachers' transfer of creative approaches in their future classrooms, acknowledging creativity not only as a skill, process or way of teaching but mainly as a way of living. The small number of students can be considered a limitation for a study, however, through the study described in this article, we have not intended to generalize our findings to the whole student-teacher population. Our effort was to find out what were the views on creativity of the students enrolled in the

specific course, therefore, all of them were interviewed at the beginning of the semester in order to collect the necessary data to guide the selection of an appropriate approach for instruction of the course content during the specific semester. However, this process contributed to our general efforts to understand our students and can inform future descriptive qualitative studies.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

Author contributions

AM is the main author (research and teaching), whereas EP contributed in the research. All authors contributed to the article and approved the submitted version.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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