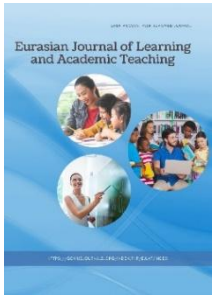

Methodology For Forming Creative Competencies Of Future Teachers In The Modern Educational Environment

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ABSTRACT

This article analyzes the methodological foundations of forming creative competencies among future teachers in the modern educational environment. The study emphasizes that teacher creativity is not only an individual talent but also a professionally developed competence based on pedagogical reflection, problem-solving, digital literacy, collaboration and innovative instructional design. The article discusses theoretical approaches to creativity in education, the structure of creative competence, methodological principles, teaching strategies and assessment tools. Special attention is paid to project-based learning, problem-based tasks, reflective practice, digital technologies and interdisciplinary integration. The article concludes that the systematic development of creative competencies in teacher education improves future teachers' readiness to design flexible, learner-centered and innovative educational processes.

Keywords: creative competence, future teacher, modern education, methodology, pedagogical creativity, digital learning, reflective practice, innovative pedagogy

Introduction

In the modern educational environment, the professional training of future teachers cannot be limited to the acquisition of subject knowledge and traditional teaching methods. Today's teacher is expected to act as a designer of learning situations, a facilitator of students' independent thinking, a researcher of classroom practice and an initiator of educational innovation. Therefore, the formation of creative competencies has become one of the central tasks of teacher education.

Creative competence in pedagogy means the ability of a teacher to generate original educational ideas, adapt teaching methods to learners' needs, solve non-standard pedagogical problems and create a motivating learning environment. It is closely connected with critical thinking, pedagogical imagination, communication, digital skills and reflective analysis. As Runco and Jaeger note, creativity is usually understood through two key features: originality and effectiveness [6, p. 92]. In teacher education, this means that a creative idea must not only be new but also pedagogically meaningful and useful for students' development.

The relevance of this issue is strengthened by rapid digitalization, changes in the labor market, the development of inclusive education and the increasing need for lifelong learning. Future teachers should be prepared not only to use ready-made methods but also to modify, combine and create new pedagogical

approaches. Therefore, the methodology of forming creative competencies should be systematic, practice-oriented and scientifically grounded.

Theoretical Foundations of Creative Competence

Creativity has been studied in psychology, pedagogy, sociology and cognitive science. In the pedagogical context, creativity is not viewed as a rare quality belonging only to gifted individuals. It is considered a developable professional ability that can be formed through a favorable educational environment, purposeful tasks and reflective practice. Amabile emphasizes that creativity depends on the interaction of domain-relevant skills, creative-thinking skills and motivation [1, p. 83]. This idea is especially important for teacher education because future teachers need both subject knowledge and the ability to transform it into engaging learning experiences.

A. Craft connects creativity in schools with possibility thinking, that is, the ability to ask "What if?" and imagine alternative ways of learning and teaching [2, p. 43]. For future teachers, this means the capacity to design lessons that encourage inquiry, dialogue and independent discovery. Pedagogical creativity is also connected with social interaction. According to Sawyer, innovation often emerges through collaboration, shared problem-solving and the exchange of ideas [4, p. 211]. Thus, the training of future teachers should include group projects, peer feedback and collective reflection.

Creative competence includes several interrelated components. The first is the cognitive component, which involves knowledge of creativity theories, teaching methods, educational technologies and child development. The second is the motivational component, which reflects the teacher's openness to novelty, willingness to experiment and professional curiosity. The third is the practical component, which includes the ability to design creative tasks, use digital tools, organize discussions and manage flexible learning activities. The fourth is the reflective component, which enables future teachers to analyze their own pedagogical decisions and improve them.

Methodological Principles for Forming Creative Competencies

The development of creative competencies requires a set of methodological principles. The first principle is learner-centeredness. Future teachers should experience such educational practices that they are expected to apply later in their own classrooms. If teacher education is based only on lectures and memorization, it cannot form creative pedagogical thinking. Students should participate in discussions, projects, simulations, case studies and microteaching activities.

The second principle is problem orientation. Creative competence is formed when students face real or simulated pedagogical problems. For example, future teachers may be asked to design a lesson for a mixed-ability class, prepare inclusive materials for students with different learning needs or create a digital activity for developing critical thinking. Problem-based learning helps students connect theory with practice and develop flexible thinking.

The third principle is interdisciplinarity. Modern education requires teachers to integrate knowledge from different fields. For instance, a language teacher may use elements of history, culture, media literacy and digital storytelling. An elementary teacher may combine mathematics, art and environmental education in one project. Such integration develops the ability to see connections and create meaningful learning contexts.

The fourth principle is reflection. Creative competence cannot develop without self-analysis. Reflection helps future teachers understand why a certain method worked or failed, how students responded to tasks and what could be improved. Reflective diaries, portfolios, peer observation and self-assessment sheets are effective tools in this process. Beghetto and Kaufman argue that classroom creativity is supported when learners are encouraged to take intellectual risks and reflect on their ideas [7, p. 18].

The fifth principle is digital integration. Digital technologies expand the possibilities of pedagogical creativity. Future teachers should learn to use online platforms, multimedia tools,

interactive presentations, virtual boards, educational applications and artificial intelligence responsibly. Mishra and Koehler's TPACK model shows that effective teaching with technology requires the integration of technological, pedagogical and content knowledge [5, p. 1029]. Therefore, digital tools should not be used mechanically; they must serve clear pedagogical goals.

Effective Methods and Technologies

One of the most effective approaches to forming creative competencies is project-based learning. In this method, students work on a meaningful educational product: a lesson plan, digital resource, thematic module, research mini-project or educational game. Project work develops independence, responsibility, cooperation and creative decision-making. It also helps future teachers understand how learning can be organized around real-life problems.

Another important method is case study analysis. Pedagogical cases present complex classroom situations that do not have one correct answer. For example, a case may describe a student who refuses to participate in group work, a conflict between learners, or difficulties in teaching abstract concepts. Future teachers analyze the situation, propose several solutions and justify their choices. This method develops professional judgment and creative problem-solving.

Microteaching is also useful in teacher training. Students prepare and conduct short fragments of lessons, after which they receive feedback from peers and instructors. This method allows them to experiment with teaching strategies in a safe environment. Through microteaching, future teachers learn to ask open-ended questions, organize creative tasks, use visual materials and adapt explanations to learners' responses.

Brainstorming, mind mapping and design thinking are effective for developing idea generation. Design thinking is especially valuable because it begins with understanding learners' needs, defining the problem, generating ideas, creating prototypes and testing solutions. In teacher education, this approach may be used to design inclusive lesson materials, digital activities or assessment tools. Creative writing and pedagogical storytelling can also be applied. Future teachers may write educational scenarios, classroom dialogues, fairy tales for primary school learners or reflective essays. Such tasks develop imagination, empathy and communicative flexibility. Cropley states that creativity in education should support both personal expression and socially valuable outcomes [8, p. 64]. Therefore, creative tasks must be connected with clear educational purposes.

Role of the Modern Educational Environment

The modern educational environment includes not only classrooms and textbooks but also digital platforms, media resources, social communication, cultural diversity and flexible learning spaces. A creative educational environment should be psychologically safe, intellectually stimulating and open to experimentation. Students should not be afraid of making mistakes, because creativity develops through trial, feedback and improvement.

The role of the teacher educator is crucial. University instructors should model creative pedagogy in their own teaching. They should use open questions, encourage alternative viewpoints, support student initiatives and connect theory with practical tasks. Future teachers learn creativity not only from what is taught but also from how it is taught.

Assessment also plays an important role. Traditional tests are not sufficient for evaluating creative competencies. It is necessary to use portfolios, project presentations, observation rubrics, peer assessment and self-reflection. Assessment criteria may include originality, pedagogical relevance, clarity of instructional design, adaptability, collaboration and reflective depth. Such assessment helps students understand that creativity is not random inspiration but a professionally organized process.

Practical Model of Formation

The methodology of forming creative competencies may be organized in four stages. The first stage is diagnostic. At this stage, the initial level of students' creative thinking,

motivation and pedagogical imagination is identified through questionnaires, interviews, creative tasks and observation.

The second stage is motivational-theoretical. Students study the concepts of creativity, innovative pedagogy, learner-centered education and digital didactics. They analyze examples of creative teaching and discuss the professional importance of innovation.

The third stage is practical-creative. Students participate in projects, case studies, microteaching, digital content creation and interdisciplinary tasks. They design lesson plans, develop educational games, create multimedia materials and test them in peer groups.

The fourth stage is reflective-evaluative. Students analyze their work, receive feedback, improve their products and present portfolios. This stage strengthens professional self-awareness and helps future teachers connect creative activity with pedagogical responsibility.

Conclusion

The formation of creative competencies among future teachers is a necessary condition for improving the quality of modern education. Creative competence enables teachers to respond to changing educational needs, design meaningful learning experiences and support students' intellectual independence. It includes cognitive, motivational, practical and reflective components.

The methodology of developing this competence should be based on learner-centeredness, problem orientation, interdisciplinarity, reflection and digital integration. Project-based learning, case studies, microteaching, design thinking, digital tools and reflective portfolios are effective means of achieving this goal. The modern teacher education system should create an environment in which future teachers can experiment, collaborate, analyze and transform pedagogical ideas into practical educational solutions.

Thus, creative competence is not an additional quality but an essential part of the professional identity of a future teacher. Its systematic formation prepares educators who are capable of innovation, flexible thinking and responsible pedagogical action in the modern educational environment.

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