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## **APPROACHES TO DEVELOPING DESIGN COMPETENCIES OF FUTURE PRIMARY SCHOOL TEACHERS THROUGH QUEST TECHNOLOGY**

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### **Abstract**

This article explores the approaches to developing design competencies in future primary school teachers through the application of quest technology. The research highlights that effective teacher preparation for professional practice necessitates the integration of innovative pedagogical tools that foster creativity, autonomy, and reflective thinking. As a contemporary interactive method, quest technology allows teacher trainees to design educational tasks, create engaging learning environments, and facilitate students’ problem-solving processes. The article analyzes the psychological and pedagogical principles underpinning the use of quest technology in teacher education, outlines the stages of developing design competence, and presents practical strategies for enhancing future teachers’ project-oriented and creative skills.

**Keywords:** quest technology, design competence, professional training, teacher preparation, interactive pedagogy, creativity, motivation, reflection.

In the modern educational landscape, the professional training of future primary school teachers is increasingly based on innovative and practice-oriented teaching methods. Among these, **quest technology** stands out for its potential to enhance professional creativity and develop the ability to design meaningful educational processes. Preparing teachers for the challenges of the 21st century requires not only mastering subject knowledge but also acquiring the skills to design and implement interactive learning scenarios [1].

Quest-based learning provides a dynamic framework where future teachers can experience the principles of problem-solving education in action. Through



participation in educational quests, teacher trainees learn to construct lessons that engage learners in research, collaboration, and creative thinking. Hence, developing design skills through quest technology becomes one of the essential directions in modern pedagogical training.

### **Theoretical Foundations of Developing Design Skills through Quest Technology**

Design skills represent a teacher's ability to plan, structure, and implement educational processes that promote student development. Within quest technology, these skills are cultivated through creating game-based, problem-oriented learning environments [2].

The theoretical basis for applying quest technology in teacher training lies in the principles of **constructivism**, **activity-based learning**, and **student-centered pedagogy**. According to these approaches, the learner actively constructs knowledge through exploration, experimentation, and reflection. Thus, quest activities provide future teachers with the opportunity to experience this learning model from within — both as participants and as designers [3].

Psychologically, quest technology contributes to the development of intrinsic motivation and self-efficacy. Engaging in quests encourages future teachers to approach educational design creatively, take initiative, and evaluate their teaching methods critically.

### **Methods for Developing Design Skills in Future Primary School Teachers**

The process of developing design skills through quest technology involves a system of pedagogical methods aimed at shaping analytical, creative, and reflective abilities [4]. These methods include:

#### **1. Modeling and simulation of educational situations:**

Trainee teachers are encouraged to design virtual or real classroom quests that simulate typical teaching challenges — such as motivating pupils, integrating subjects, or fostering teamwork. This approach develops their ability to forecast and manage the learning process effectively [5].



**2. Collaborative quest design projects:**

Future teachers work in small groups to create and implement educational quests. This cooperative activity enhances their planning, communication, and leadership skills while fostering professional collaboration.

**3. Creative workshops and brainstorming sessions:**

During such sessions, students generate innovative ideas for designing quest scenarios. Brainstorming helps them overcome psychological barriers to creativity and expand their methodological thinking [6].

**4. Reflective analysis of designed quests:**

After completing their quest projects, students analyze their experiences, identifying strengths, weaknesses, and areas for improvement. Reflection strengthens professional self-awareness and consolidates design competence.

**5. Integration of digital tools and platforms:**

The use of digital technologies — such as Google Forms, LearningApps, or ClassDojo — allows future teachers to design online quests and interactive materials. This not only enhances their technological literacy but also increases engagement in the learning process [7].

## **Pedagogical Significance of Quest-Based Design Training**

The development of design skills based on quest technology has a profound pedagogical significance. It enables future teachers to:

- apply innovative teaching methods effectively;
- create interactive and student-centered learning environments;
- foster pupils' curiosity and motivation for learning;
- integrate cross-curricular content in creative ways;
- implement differentiated instruction strategies;
- develop a reflective approach to teaching and learning [8].

Through quest-based design practice, teacher trainees become more confident in their ability to organize lessons that promote active learning, critical thinking, and collaboration among students.



### Challenges and Perspectives

Despite its effectiveness, implementing quest technology in teacher education presents certain challenges [9]. These include the need for sufficient methodological training of instructors, limited access to digital resources, and the necessity to balance innovation with curriculum requirements. However, with institutional support and continuous professional development, these obstacles can be overcome. The perspective of quest technology in teacher training lies in its **integration with digital pedagogy** and **project-based learning**. Future teachers who master quest-based design skills will be better equipped to meet the demands of modern education — promoting creativity, inclusiveness, and lifelong learning among their students [10].

Developing design skills in future primary school teachers through quest technology is a promising direction in contemporary pedagogy. Quest-based learning not only enhances professional competence but also transforms the teacher's role from a knowledge transmitter to a creative facilitator of learning.

By engaging in the process of designing educational quests, future teachers acquire essential 21st-century skills — critical thinking, creativity, collaboration, and reflection. The methodological development of these skills ensures that the next generation of educators will be able to design meaningful, motivating, and effective learning experiences for young students.

Thus, integrating quest technology into teacher education represents an innovative pedagogical strategy that bridges theory and practice, fosters professional self-realization, and strengthens the creative potential of future educators.

### References:

1. Dicheva, D., Dichev, C., Agre, G., & Angelova, G. (2015). Gamification in education: A systematic mapping study. *Educational Technology & Society*, 18(3), 75–88.
2. Kapp, K. M. (2012). *The Gamification of Learning and Instruction: Game-Based Methods and Strategies for Training and Education*. San Francisco, CA: Pfeiffer.



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3. O'Connor, E. A. (2019). Quest-based learning: A new frontier for educational gamification. *Journal of Applied Instructional Design*, 8(1), 1–11.
4. Kholbaeva D.D., Tasheva D.S. Pedagogical techniques and methods of forming interest in the lessons of the Russian language. *Web of scientist: international scientific research journal*, ISSN: 2776-0979, Volume 3, Issue 3, Mar., 2022. -p.238
5. Kholbaeva, D., & Tasheva, D. (2022). Theoretical And Practical Aspects Of Monitoring The Acquisition Of Knowledge, Skills And Abilities By Students In The Russian Language In Universities. *Евразийский журнал социальных наук, философии и культуры*, 2(11), 115-118.
6. Ullieva, S.. (2022). HISTORICAL AND COMPARATIVE CHARACTERISTICS OF ZOONYMS IN THE UZBEK AND RUSSIAN LANGUAGES. *Евразийский журнал академических исследований*, 2(6), 520–523. извлечено от <https://in-academy.uz/index.php/ejar/article/view/2247>
7. Tasheva D.S., Kubaeva N.A. Modern educational technologies in the aspect of a student-centered approach in teaching foreign languages. *Eurasian Journal of Learning and Academic Teaching*. Volume 12|, 2022. -p.35. [www.geniusjournals.org](http://www.geniusjournals.org)
8. Khaydarovna, Ullieva Sanobar. "Specific Aspects of Linguistic Study of Literary Characters." *Zien Journal of Social Sciences and Humanities* 16 (2023): 38-40.
9. Tasheva, D. (2022). Methods Of Using Didactic Materials To Enhance Activities In The Russian Language Lessons. *Ta'lim Va Rivojlanish Tahlili Onlayn Ilmiy Jurnal*, 2(1), 325-328.
10. Khaydarovna, Ullieva Sanobar, Umarova Dilfuza Mamatkulovna, and Allayarova Dilfuza Klichevna. "Artistic Character As A Personality Model: Methods Of Linguistic Representation Of The Human Image." *The Seybold Report* (2023).