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DEVELOPING TEACHERS' PERSONAL COMPETENCE THROUGH GAME-BASED TECHNOLOGIES IN ORGANIZING TECHNOLOGY LESSONS

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Abstract: This article explores the role of game-based technologies in developing the professional and personal competence of teachers during technology lessons. The integration of interactive educational tools not only improves students' motivation and engagement but also enhances teachers' creativity, adaptability, and pedagogical mastery. Through modern didactic approaches, the use of educational games is shown to foster teachers' planning, communication, digital literacy, and reflective skills. The research presents methods, practical strategies, and outcomes of implementing game-based tools in technology education, highlighting their potential for teacher development.

Keywords: game-based learning, teacher competence, technology education, interactive methods, digital pedagogy.

Introduction:

In the era of digital transformation, the educational landscape demands that teachers not only deliver subject knowledge effectively but also adapt to innovative teaching methods. Game-based technologies have become increasingly popular in classrooms as tools for active learning. These tools help create engaging, student-centered environments and simultaneously offer a powerful medium for teacher professional development.

Technology as a subject requires teachers to possess practical skills, up-to-date knowledge, and the ability to motivate students through hands-on, problem-solving tasks. Incorporating game elements into lessons enables teachers to approach teaching creatively, manage diverse learning styles, and foster student collaboration. However, for these benefits to be fully realized, teachers themselves must develop the necessary competence to select, implement, and evaluate game-based methods meaningfully.

Methods:

This study utilized qualitative and practical methods to examine how game-based educational tools influence teachers' professional development. The following strategies were applied:

- **Observation and interviews** with technology teachers using game-based approaches.
- **Experimental sessions** implementing digital games and simulations in lesson planning and delivery.
- **Self-assessment surveys** measuring perceived growth in personal and pedagogical competence.
- **Content analysis** of training programs and workshops related to digital tools and gamification.

Results:

The analysis revealed several key outcomes of integrating game-based technologies into technology education:

- Teachers showed increased confidence in designing interactive lesson plans and integrating digital tools into their curriculum.
- Use of educational games improved communication between teachers and students, fostering a more collaborative classroom atmosphere.
- Teachers developed stronger time-management and classroom control strategies while using game elements.
- Reflective practices became more prevalent, with teachers evaluating the success of each lesson more critically and adjusting their teaching accordingly.
- There was notable growth in digital literacy, including familiarity with educational software, online game platforms, and assessment apps.

Discussion:

The findings suggest that game-based learning not only benefits students but also acts as a catalyst for teacher growth. Through designing and leading game-based lessons, teachers expand their methodological toolkit, improve classroom dynamics, and better understand students' learning processes.

Furthermore, participation in game-driven environments helps educators to become more adaptable and open to pedagogical innovations. This reflective engagement encourages continuous learning and fosters an educator identity aligned with 21st-century teaching standards.

However, challenges remain — including limited access to digital infrastructure in some schools, lack of training opportunities, and resistance to new methods among traditionally trained educators. Addressing these barriers through institutional support and professional development programs is vital.

Conclusion:

Game-based technologies provide a dynamic platform for both student engagement and teacher competence development. In technology education, such tools empower teachers to enrich lessons, cultivate practical and cognitive skills, and nurture lifelong learning habits. Developing teacher competence through these tools requires intentional effort, ongoing support, and a willingness to innovate.

To achieve the full benefits of this approach, educational systems must prioritize teacher training in digital pedagogies and promote a culture of experimentation and reflection in teaching practice.

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