

**IMPROVING SOFTWARE AND METHODOLOGICAL SUPPORT FOR  
DEVELOPING DIGITAL COMPETENCIES IN PRESCHOOL EDUCATIONAL  
ORGANIZATIONS**

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**Annotation:** This article comprehensively analyzes the main ways of improving software and methodological support for developing children's digital competencies in preschool educational organizations (PEOs). The article discusses the importance of forming digital literacy, the necessity of creating interactive and game-based software applications, and the mechanisms for improving teacher qualifications and methodological support. It also highlights ways to integrate innovative technologies such as robotics, virtual reality, and artificial intelligence into the educational process based on international experience. This article is intended for professionals, researchers, and parents in the field, providing a deep analysis and practical recommendations on how to prepare the next generation for the digital age.

**Keywords:** preschool education, digital competencies, software support, methodological support, digital literacy, innovative technologies, robotics, virtual reality, teacher qualifications.

## **Introduction**

In today's era of globalization and technological advancement, the education system faces new and more complex tasks. The next generation must not only be consumers of information but also individuals who can analyze it, create new ideas, and solve problems. This process begins at the preschool education stage. At this stage, forming digital competencies in children is not only a requirement of the times but also a crucial factor for a person's all-round development. This article aims to provide a broad overview of ways to improve software and methodological support to effectively organize this process.

### **New Stages of Improving Software Support**

When creating software, it is crucial not to be limited to just educational programs but to consider the psychological and developmental characteristics of a child's age.

1. Creating Programs Based on Adaptability:
  - Adaptive Learning Systems: Modern programs should be able to determine each child's learning speed and level and offer tasks accordingly. This is achieved with the help of artificial intelligence (AI)-based analytical tools.
  - Personalized Learning Paths: It is essential to offer different learning paths based on each child's interests, abilities, and knowledge level, such as creating modules focused on developing math, language, or creative skills.
2. Continuously Updating Content:
  - Cloud-based Platforms: Placing all educational materials and programs on a centralized cloud platform allows for continuous updates and the introduction of uniform standards across PEOs.

- Multimedia and Interactivity: Software applications should be enriched not only with games but also with animated stories, plot-based games that allow interaction with characters, and audio-visual educational resources.

**3. Ensuring Child Safety:**

- Content Filtering: All materials in the software must be safe and age-appropriate for children. Inappropriate advertisements, violent scenes, or information not suitable for their age must be completely excluded.

- Time Control: It is important to include special functions in the programs that allow parents and educators to limit and monitor the time a child spends on the device.

**An Expanded Approach to Improving Methodological Support**

For effective use of software, it is necessary to improve the competence of educators and provide them with comprehensive support:

**1. A Systematic Model for Improving Teacher Qualifications:**

- "Digital Educator" Certificate: Introduce a mandatory certification system for educators on using digital education technologies. This system should assess not only the teacher's technical skills but also their methodological knowledge on integrating digital resources into the educational process.

- Remote Learning Resources: Create opportunities for continuous professional development by organizing online learning platforms, webinars, and masterclasses for educators.

**2. Centralizing Methodological Resources:**

- A Single Electronic Library: Establish a single electronic library that includes all methodological guides, lesson plans, video instructions, and other resources. These resources should be freely accessible to PEO educators.

- Peer-to-Peer Knowledge Sharing: Create social networks or forums for educators to share experiences, discuss problems, and find solutions together.

**3. Mechanisms for Involving Parents:**

- Electronic Journals and Information Systems: Introduce mobile applications and electronic journals so that parents can monitor their child's development.

- Seminars for Parents: Regularly hold seminars and webinars at PEOs for parents on how to properly use digital technologies.

**Conclusion**

Developing digital competencies in preschool education is not just about teaching children how to use computers and tablets; it's about forming 21st-century skills—creativity, critical thinking, collaboration, and problem-solving—in children. This requires systemic, safe, and flexible software support, as well as complex methodological support aimed at training qualified educators who can effectively use it. By gradually introducing innovative technologies and actively involving parents in the process, these goals can be achieved.

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