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BASED ON INFORMATION RESOURCES FOR TRAINING FUTURE TEACHERS BASED ON DIGITAL TECHNOLOGIES

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Abstract
The article deals with the issues of scientific and methodological justification of information resources for the preparation of future teachers for professional activities based on digital technologies.
This statue can be used by those who are aware of the problems of increasing the qualifications of future specialists.

Keywords: Digital technology; future teacher; training; professional activity; information; resources; text materials; mathematical models; computerized; education; program; multimedia; applications; set; educational and methodological; webinar; content; enrichment; improvement; practical; laboratory; devices; programs; functional tasks; implementation; training; stands; device.

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Introduction

At present, achieving new qualitative changes and high efficiency in preparing the modern teacher for professional activity is becoming a standard requirement. The reason for this is that a contemporary teacher must be innovatively developed, and this, naturally, is achieved through the application of innovative approaches in preparing future teachers for their professional practice. This issue has become even more urgent with the introduction of digital technologies into educational practice.

In this article, the focus is placed precisely on systematizing the information resources and providing the scientific-methodological justification for preparing future technological education teachers (TTET) for modern professional activity based on the foundations of digital technologies (FDT).

To address the issue at hand, we first identified and substantiated the information resources related to preparing future technological education teachers (TTET) for professional activity within the framework of digital technologies (FDT).

Based on the results of our research in this field, we concluded that it is advisable to organize and develop the information resources for preparing TTET for professional activity within the FDT framework in the following sequence [1–3]:

1. Textual materials. In this category, theoretical and practical educational materials are prepared in a systematized form, and conditions are created for forming an updated educational content based on the information developed.

2. Mathematical models. This includes mathematical models aimed at studying the course of the educational process, particularly dynamic models of instructional management, models for determining and evaluating goal achievement, and models for assessing educational quality.

3. Organizational-structural models. This section focuses on constructing organizational-structural, organizational-functional, and organizational-principled models that reflect the interrelations among states, phenomena, and key components within the educational process.

4. Computer-based educational programs. Here, attention is given to preparing computer programs designed to improve the study of lecture materials, enhance laboratory and other practical activities, support independent learning, and conduct training sessions aimed at advancing TTET preparation for professional activity.

5. Multimedia materials. This includes the following tools and resources: service software; software for assessing and testing learners' knowledge; professional computer games and training modules; electronic virtual stands; electronic virtual practices; electronic educational literature; intellectual, cybernetic, and similar books; simulation-modeling software; applied software packages; collections of interactive working programs; intelligent technological maps; informational maps; intelligent instructional systems, and similar resources.

6. Applied program packages. This section emphasizes software that defines the functional tasks of the first and second categories of instructional support in preparing TTET within the FDT framework, as well as programs that determine the stages for improving the scientific-methodological support for preparing future technological education teachers for professional activity.

7. Catalog of educational-methodical resources. According to the results of our experiments and research, educational-methodical support is considered the leading and essential indicator in improving the preparation of TTET for professional activity. Through such support, it is possible to elevate the professional competence of future specialists to the level required by global standards.

8. Equipment complex for webinar technologies. At present, webinar technologies play an invaluable role in providing electronic information resources, searching for them, and integrating them into practice. For this reason, webinar technologies are increasingly becoming a fundamental component in organizing the educational process in higher education institutions. Therefore, webinar technologies now create extensive opportunities for organizing online education, teleconferences, teleseminars, and other mass events. A webinar is capable

of forming a virtual classroom that unites all learners and participants regardless of their geographical location, providing them with broad opportunities and favorable conditions for joint participation.

9. Intellectual resources. This component focuses on scientific and technological achievements, as well as pedagogical innovations used in practical activity, aimed at improving the scientific-methodical support of TTET preparation for professional work. These resources are systematized in such areas as reference information, didactic materials, and collections of creative information. The goal is to provide informational support for forming educational content enriched with reference data, expanded with didactic materials, and refined through creative informational resources.

10. A complex of apparatus and programs related to performing the functional tasks of devices and stands related to practical and laboratory training and conducting training. It is well known that, through practical and laboratory sessions, learners carry out experiments and practical tasks that ensure the acquisition and mastering of professional educational content. In such sessions, the topic of the class, its purpose, the allotted time, the content of the topic, the list of recommended literature, the set of devices and stands required for conducting the session, instructions and guidelines for their use, as well as equipment and software intended for training activities, are clearly presented.

In this regard, specific devices, stands, equipment, and software aimed at organizing practical laboratory sessions for preparing TTET for professional activity are developed. We prepared them according to the following directions:

- a set of instructional visual aids relevant to preparing TTET for professional activity;
- various specialized devices and simulators intended for applying the updated educational content of TTET in practice;
- moving models, including the organizational-structural model of preparing TTET for professional activity, the organizational-structural model of implementing a “systemic approach” in improving the scientific-methodological support of TTET within the FDT framework, the principle-based model for developing the scientific-methodological support system for TTET, and the organizational-structural models for improving the scientific-methodological support within the FDT framework;
- specialized stands, including stands that simulate exercises and operational activities, as well as purpose-built handmade didactic devices;
- special software, including pedagogical simulation programs that model the processes of general professional and specialized disciplines important for preparing TTET for their professional activity;
- machines and machine components, including devices designed to prepare future specialists for professional work and samples corresponding to the operational variations performed by these machines;

• standard instruments, apparatus, and tools for practical and laboratory sessions, including instruments and tools used regularly in laboratory-practical activities, tasks, and similar resources.

As a conclusion to this research, it can be noted that the information resources described above provide broad opportunities for optimizing the following areas of practical activity aimed at improving the preparation of TTET for professional activity within the FDT framework:

• simulating the functional tasks of organizational-structural models;

• effectively organizing a sequence of training activities aimed at developing TTET's professional knowledge, skills, and competencies through professional computer games;

• optimizing the methods of preparing TTET for professional activity by using multimedia educational technologies in their field of study, and similar tasks.

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