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Educational policy and management strategies in the development of digital skills and media competencies in teacher training: New approaches to education

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Abstract. The study analyzes the need to integrate digital skills and media competencies into the process of teacher training. It has been found that modern educational programs often do not meet the requirements of the digital era, necessitating their updating and the introduction of courses on digital literacy. The results highlight the importance of continuous professional development for teachers and the adaptation of educational standards to rapidly changing technological conditions.

Keywords: media education, digital literacy, professional development of teachers, integration of technology in education, updating curricula, ICT in education, education strategies

Introduction

In the era of digitalization, educational systems worldwide are confronted with the need to integrate digital technologies into the educational process. This is driven by the fact that digital skills and media competencies are becoming crucial in preparing students for life in an information society. In this context, special

attention is not only given to mastering the technical aspects of using modern media tools but also to developing critical thinking, analytical skills, and the ability to create informational content.

Digital skills are an integral part of modern education — from basic computer proficiency with Internet access to advanced skills in programming, working with big data, and artificial intelligence [1–4]. These skills are complemented by media competencies, which include critical evaluation of media resources, understanding the ethical and legal aspects of media consumption and production.

The relevance of developing these skills and competencies is underscored by their importance for the personal development of students and their future professional activities. In today's world, a successful career often depends on the ability to work effectively with information, analyze and critically evaluate it, and also create new content that meets the demands of the information society. In the context of globalization and digitization of society, professional training also cannot avoid integrating digital tools into the educational process. This is necessary to prepare youth for successful adaptation and effective work in the modern information-rich world. Particularly, this applies to the training of teaching staff, who must not only possess these skills at a high level but also be able to pass them on to students, nurturing the next generation of information-literate citizens [5, 6].

The main goal of this study is to analyze and evaluate current approaches to the training of teaching staff in the context of rapidly developing digital technologies and media competencies. The study aims to identify potential gaps in educational programs for future teachers and develop recommendations for improving such programs.

To achieve this goal, the study will focus on the following tasks:

- reviewing trends in creating curricula: analyzing teacher training programs at various educational institutions to determine the degree of integration of digital technologies and principles of media literacy;
- evaluating teacher competencies: studying the level of digital preparedness and media competencies among current and future educators;
- identifying problems and gaps: pinpointing the main difficulties and shortcomings in the training of teaching staff related to the need to use modern media resources;
- developing methodological recommendations: proposing specific changes and additions to be made to the curricula, which will help improve the quality of teacher training in the field of digital technologies and media literacy.

During the study, closed results from surveys and interviews with educators were used, allowing conclusions to be drawn about their level of digital skills and media literacy. Surveys were distributed among teachers from various schools and faculty from colleges and universities — participants in the "Media Class in the Moscow School" project — to assess their experience using digital technologies in educational practice. Additionally, an analysis of curricula was conducted to assess the presence and quality of integration of digital literacy and media education modules.

MEDIA EDUCATION MANAGEMENT

The collected data were subjected to statistical generalization and synthesis to determine the main trends and identify significant patterns. The use of mixed research methods allowed a comprehensive approach to the analysis of the collected information and formed a more objective and complete picture of the current situation in the training of teaching staff in the context of education digitization.

Current State of Digital Skills in Education

To illustrate the mentioned problems, the following examples can be cited:

- Using Multimedia Technologies in Classrooms: During a study conducted in 25 different schools, it was discovered that more than 60% of the teachers surveyed felt insecure using interactive boards and educational apps. This indicates insufficient training and support in mastering these technologies.
- Teaching Media Disciplines: Although many institutions have begun to include specialized courses in their curricula, the lack of qualified teachers often leads to these courses being taught without a proper understanding of key concepts and methodologies, reducing their effectiveness.
- Using Cloud Technologies: Various systems for collaborative project work using cloud technologies are actively implemented in higher education institutions; however, educators face difficulties in using these systems due to the lack of prior training and support, leading to operational failures and data loss.
- Digital Literacy Courses: Courses aimed at teaching educators the basics of information technology are actively introduced; however, the content of these courses often remains unchanged for several years, which does not allow for the acquisition of knowledge and skills that are up-to-date with the latest technological trends.

These examples confirm that alongside the implementation of digital devices and internet resources in the educational process, many educational institutions face problems in training teaching staff for their effective use. The lack of adequate professional training and timely updating of curricula becomes an obstacle to the full use of the potential of modern technologies in education.

Another significant issue is the insufficient focus on developing critical thinking and media literacy among future teachers. In an era of information overload, the ability to analyze and evaluate information becomes a critically important component of a teacher's professional competence. Nevertheless, many educational institutions still do not pay enough attention to the development of these skills.

The current state of teacher training in the context of education digitization requires a comprehensive approach to reforming educational programs. It is necessary to create and implement updated courses that would foster the development of digital skills and media competencies, as well as stimulate the use of innovative educational technologies and methodologies in teaching practice. Only in this way can teaching staff be prepared to work effectively in the modern information-educational space [7–10].

Rethinking approaches to the training of teaching staff becomes extremely relevant in the context of global changes in the educational environment, triggered by digital transformation. Traditional teaching methods are giving way to innovative approaches in which digital technologies play a leading role. This necessitates a reevaluation of existing educational programs to prepare educators for the dynamically changing requirements of the modern educational process:

- Digital Technology Integration: Digital technologies have radically changed the educational environment, offering new possibilities for interactive and personalized learning. Educators are required not only to master these technologies but also to integrate them into the teaching process in a way that enhances the quality of education and fosters the development of critical thinking among students.
- Media Literacy: The increase in information flow and the availability of media resources demand new competencies in media literacy from teachers. Educators must be able to navigate the information stream independently and teach their students to do the same. Thus, educational programs should include the development of skills for critical analysis of media content and the formation of a manipulation-resistant perception.
- Soft Skills Development: The modern educational process is increasingly focusing on the development of soft skills, such as effective communication, high emotional intelligence, critical thinking, teamwork ability, and adaptability to changes. Teaching staff should be trained in methodologies that promote the development of these skills in students, which also implies a review and adaptation of curricula.

Finally, changes in societal and economic processes are setting new requirements for education as a whole. Teachers, as key figures in the education system, must be prepared for rapid adaptation to these changes, which is only possible through innovative training and continuous professional development.

A study of current professional development programs has revealed weaknesses in the integration of digital skills and media competencies into the process of training teaching staff. Primarily, the data showed that while programs at most educational institutions contain elements of digital literacy training, the quality of such content often does not meet the demands of the current agenda. Specifically, in universities training teachers, digital literacy courses are often fragmented and unsystematic, hindering the formation of a comprehensive understanding of the issues and the mastery of skills among students.

One of the significant findings was that, despite the availability of technical means and access to information technologies, teachers often lack sufficient competencies for their effective use in educational purposes. This indicates the need for a more targeted and structured approach to teaching digital skills and media competencies within teacher training.

Additionally, it was found that many professional development programs are unable to adapt timely to new technological and social realities, which impacts

the level of teacher preparation. Ultimately, this makes graduates less competitive in the job market, underscoring the need to reform approaches to teacher education in light of current and future professional requirements.

Case Studies and Examples

Comparing the results of the current study with previous works in the field of teacher training revealed both similarities and differences in approaches to integrating digital skills and media competencies. Earlier studies also highlighted the gap between the potential of digital technologies and their actual level of use in educational practice, which is confirmed by the data from our analysis. However, while previous studies mainly focused on the technical aspects of using digital tools, our research emphasizes the need to develop critical thinking and media literacy as key components of professional teacher training.

Previous work in this field indicated teachers' insufficient preparation for effective use of ICT in the educational process, which is also reflected in our work. Unlike earlier studies, which often just stated the problem, we propose specific recommendations for improving curricula to enhance the level of digital and media competence of educators. These include the integration of specialized modules on media education and digital literacy, as well as the development of methodological approaches that actively use the possibilities of interactive and networked learning.

Furthermore, our research noted the importance of continuous professional development for teachers in the context of rapidly changing technological and media landscapes, which was also highlighted in several previous works. However, we went further, emphasizing that professional training should be adaptive and include regular updates to meet current technological trends and changes in educational standards.

The introduction of digital technologies into the educational process opens new horizons for improving the quality and accessibility of education but comes with a set of challenges and complexities. The research in this area has identified key issues that arise in the process of adapting educational institutions and teaching staff to the digital era.

Let's consider the main trends and challenges in contemporary education:

- Integration of Learning Platforms and Tools: More educational institutions are integrating platforms such as Moodle and Google Classroom, along with other tools for course management and student interaction. This facilitates the creation of a flexible and interactive learning space, where materials and resources are accessible anytime and anywhere.
- Development of Distance Education: The COVID-19 pandemic significantly accelerated the shift to online learning formats, confirming the feasibility and effectiveness of distance education in various contexts.
- Inequality in Technical Equipment and Resource Access: A major problem remains the disparity in the level of technical equipment and internet access

across different socio-economic groups and regions, which can exacerbate educational inequality.

- Teacher Training and Retraining: Many teachers encounter difficulties in mastering new technologies and teaching methods, indicating the need for systematic professional training and support.

- To optimize teacher training programs in the context of developing digital skills and media competencies, educational institutions might consider the following recommendations.

- Integration of Digital Technologies into Curricula: Institutions should actively include courses on digital technologies and media literacy that cover working with educational platforms, content creation and distribution tools, as well as the basics of programming and safe internet use.

- Professional Development for Teachers: It is crucial to organize regular training and qualification improvement courses for teachers to update their skills in line with the latest technological trends. This helps teachers not only master new tools but also learn to integrate them into the educational process.

- Development of Critical Thinking and Media Literacy: Besides technical skills, curricula should focus on developing critical thinking and media literacy among students, which involves teaching how to analyze and critique media content, understand media influences, and develop effective communication skills.

- Industry Collaboration: Educational institutions should strive to partner with technology companies and the digital media industry to ensure the relevance of their programs and provide students with opportunities to apply their skills in real-world settings.

- Support for Educational Innovations: Implementing innovative teaching methods such as flipped classrooms, project-based learning, and gamification can significantly enhance student engagement and motivation, as well as facilitate the deep acquisition of digital skills and media competencies.

- Ensuring Access to Resources: It's important that all students have equal access to digital devices and high-speed internet both at the institution and at home, reducing digital inequality and ensuring fairer learning conditions.

- Evaluation and Feedback: Regular assessment of the effectiveness of educational programs and analysis of feedback from students and teachers can help timely adjust and optimize learning processes.

Conclusions

The prospects for further research in the integration of digital skills and media competencies into teacher training programs are quite extensive. Firstly, it is important to conduct a deeper analysis of the impact of various educational technologies on learning outcomes to identify which technologies are most effective for developing specific skills and competencies. Another significant area of research concerns the development and testing of new teaching models that fully integrate

digital tools and methods into the educational process, ensuring active student participation and increasing their motivation.

Furthermore, the academic community can explore issues of equity and accessibility in educational technologies, examining how the digital divide affects educational opportunities across different socio-economic groups. This research could help develop strategies aimed at eliminating inequality and ensuring equal access to quality education for all students.

Research into the effectiveness of continuous professional education programs for teachers in the context of rapidly evolving technologies is also of interest. It is crucial to assess how often teachers need to update their skills to meet current demands and which training methods are most effective for adult learners.

Additionally, there is a need for broader multidisciplinary research that combines approaches from educational sciences, psychology, information technology, and sociology to comprehensively assess the impact of digitalization on the educational environment. This would not only improve teacher training but also provide a deeper understanding of how digital technologies can make the educational process more inclusive and effective.

Recognizing that digital literacy and media education must become integral parts of professional training for all educators requires educational institutions to take active steps to implement relevant modules and courses. This, in turn, necessitates ongoing professional development for teachers and updating their skills in line with the latest technological advancements.

Furthermore, educational institutions must ensure equal access to resources and technologies for all categories of educators, which will help minimize digital inequality and contribute to creating a more equitable educational space. Only through such a comprehensive approach can a high level of teacher training be achieved, which in turn will enhance the overall quality of education and make it more adapted to the needs of modern society.

In conclusion, we should emphasize the critical importance of integrating digital skills and media competencies into teacher training programs. This not only opens up new opportunities for enhancing the quality of the educational process but is also a necessary condition for preparing teachers capable of effectively working in the rapidly changing digital world. The research findings indicate a need for updating and adapting curricula to meet modern technological and media realities, as well as preparing teachers for active and thoughtful use of digital tools in educational practice.

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Образовательная политика и стратегии управления в развитии цифровых навыков и медиакомпетенций при подготовке педагогических кадров: новые подходы к обучению

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Аннотация. Обосновывается необходимость интеграции цифровых навыков и медиакомпетенций в процесс подготовки педагогических кадров. Выявлено, что современные учебные программы часто не соответствуют требованиям цифровой эры, что требует их актуализации и введения курсов по цифровой грамотности. Результаты подчеркивают важность непрерывного профессионального развития учителей и адаптации образовательных стандартов к быстро меняющимся технологическим условиям.

Ключевые слова: медиаобразование, цифровая грамотность, профессиональное развитие учителей, интеграция технологий в образование, обновление учебных программ, ИКТ в образовании, образовательные стратегии

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