

METHODOLOGY FOR DEVELOPING INDEPENDENT LEARNING ACTIVITIES OF FUTURE PRIMARY SCHOOL TEACHERS IN A CLOUD TECHNOLOGY ENVIRONMENT

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Abstract: This article discusses the pedagogical and methodological foundations for developing the independent learning activities of future primary school teachers in a cloud technology environment. In particular, it analyzes the legal and regulatory framework for the use of cloud and digital technologies in the educational process, the priority directions for improving the mechanism of training future teachers, and modern approaches to organizing independent learning. Furthermore, the study scientifically substantiates actual issues and their solutions related to improving the quality of education through the effective use of innovative and information-communication technologies, developing independent learning competencies, and organizing education based on non-traditional methods.

Keywords: cloud technologies, independent learning, future primary school teachers, pedagogical competence, digital learning environment, innovative educational technologies, information and communication technologies, didactic approach, educational effectiveness, distance learning, interactive methods, digitalization of the educational process.

INTRODUCTION

Within the ongoing modernization of the national education system, preparing future primary school teachers in accordance with contemporary requirements has become one of the most urgent tasks. In particular, under conditions of digital transformation, the introduction of cloud technologies into the educational process significantly expands opportunities for effectively organizing the independent learning activities of future primary school teachers. As an information society continues to develop, knowledge and information have become primary resources, while the ability to acquire and manage them has emerged as an essential component of pedagogical activity.

From this perspective, the primary objective of the modern educational process is to develop independent learning competencies among future primary school teachers and enhance their ability to function effectively within a digital educational environment. In this regard, cloud technologies serve as an important tool that supports learners in acquiring knowledge according to their individual needs, promoting self-development, and ensuring the continuity of education.

The Decree of the President of the Republic of Uzbekistan No. PF-5349 dated February 19, 2018, entitled "On Measures for the Further Improvement of the Information Technologies and Communications Sector," identifies the introduction of modern information and communication technologies into the education system and the training of qualified specialists for this field as priority directions. The document emphasizes that the existing system of personnel training, retraining, and professional development does not fully correspond to the rapid pace of information technology development. Furthermore, insufficient implementation of advanced pedagogical methods and limited opportunities for adopting international experience are identified as significant challenges.

This situation creates the necessity for introducing modern approaches into the process of training future primary school teachers, particularly educational environments based on cloud technologies. Cloud technologies function as an important pedagogical instrument for organizing teachers' independent learning activities, ensuring effective use of global educational resources, and supporting continuous professional development.

LITERATURE REVIEW

Issues related to the use of innovative and information-communication technologies in economic education can be found in the scientific research works of a number of national and foreign economists, pedagogical scholars, and specialists working in the field of information and communication technologies. In particular, the scientific studies of scholars such as S.G'ulomov, B.Begalov, D.Tojiboeva, M.Hakimova, N.Fayzullaeva, I.Mamajonov, S.Xasanov, J.Yo'ldoshev, B.Safarov, G.Jukov, P.Matrosov, S.Kaplan and P. I.Pidkasistogo address various aspects of innovative and information technologies within the educational process.

RESEARCH METHODOLOGY AND EMPIRICAL ANALYSIS

It is well known that one of the priority tasks of the higher education system is to develop future primary school teachers as comprehensively mature individuals, professionally competent specialists, and socially active citizens. Modern educators are expected to possess advanced professional competencies such as independent thinking, conducting scientific research, analyzing educational problems, and developing effective solutions for them.

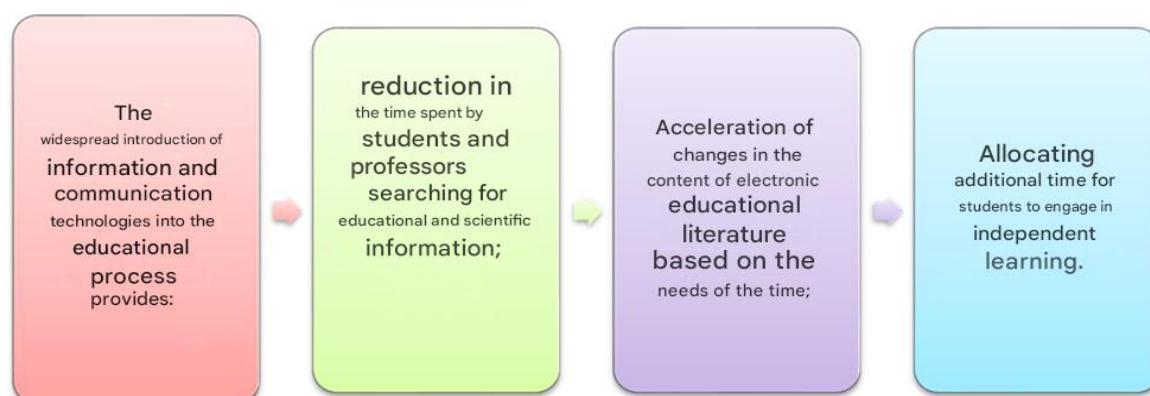
Particularly within the context of a digital educational environment, competencies related to organizing independent learning activities, selecting and processing information, and using information purposefully have become especially important for teachers. These competencies serve as essential factors in ensuring the professional preparation of future primary school teachers and enabling them to carry out effective pedagogical activities based on cloud technologies.

Today, the reforms being implemented within the education system require future teachers to become competitive specialists with well-developed critical thinking, communicative, and reflective skills. From this perspective, educational environments organized on the basis of cloud technologies function as effective tools for developing students' independent learning activities, ensuring deep knowledge acquisition, and supporting continuous professional development.

Modern educational policy is being shaped in accordance with global development trends. In particular, the following priorities can be identified:

- the acceleration of digitalization processes and technological modernization within the educational system;
- the expansion of information-based educational environments and the strengthening of integration with global educational resources;
- the transition from traditional knowledge-based instruction toward a competency-based educational approach;
- the increasing priority of independent learning and self-development mechanisms within pedagogical activities.

The large-scale integration of information and communication technologies into the educational process provides the following opportunities [4]:



RESULTS

Within the framework of educational curricula, organizing the process of preparing future primary school teachers on the basis of modern pedagogical technologies represents one of the key factors in improving educational effectiveness. In particular, designing and implementing educational processes within cloud technology environments is emerging as one of the most significant directions of digital pedagogy. Such an approach involves the integrated use of digital tools, interactive platforms, electronic educational resources, and multimedia materials throughout the learning process.

The application of problem-based learning technologies, visualization-oriented approaches, as well as integrative and interactive methods in lecture sessions contributes to increasing the cognitive activity of future primary school teachers. At the same time, these methods create opportunities for developing students' competencies related to independent thinking, analytical approaches, reflective assessment, and optimal decision-making in problematic situations. Consequently, educational environments organized on the basis of cloud technologies are regarded as methodologically effective tools for developing future teachers' independent learning activities.

The systematic use of interactive methods such as collaborative learning, cluster techniques, INSERT, and T-chart strategies in seminar sessions also contributes to enhancing students' cognitive and communicative activity. Through these methods, opportunities expand for involving students in independent learning activities and developing their analytical thinking, information processing abilities, and competencies related to responding to problem situations.

Furthermore, the use of interactive approaches such as lecture-debates, seminar-debates, problem situations, case studies, and pedagogical games within cloud-based educational environments significantly increases the effectiveness of the educational process. These methods function as important didactic tools for activating students' independent knowledge acquisition activities, developing reflective thinking, and organizing effective learning activities within digital educational environments.

These interactive methods contribute to the development of students' creative and critical thinking competencies and direct them toward the systematic and in-depth analysis of the studied problems. In addition, by activating students' independent learning activities, they increase cognitive engagement and ensure active participation in the educational process. As a result, the necessary didactic conditions are created for organizing and managing effective learning activities within digital educational environments formed on the basis of cloud technologies.

CONCLUSION

In the modern education system, processes of digital transformation are generating new requirements for future primary school teachers. In particular, preparing educators who are

capable of operating effectively within cloud technology environments and possess skills in searching, processing, and efficiently utilizing information has become an urgent task. The professional effectiveness of teachers is directly determined by their level of digital competence, information culture, and ability to use modern technologies effectively.

From this perspective, first, future primary school teachers must acquire competencies related to searching, analyzing, storing, and effectively utilizing information in order to function freely within cloud-based and digital educational environments. Second, the formation of information culture should not be limited to a single subject area but should instead be implemented through the integration of all academic disciplines. Third, the introduction of cloud technologies into all stages of the educational process requires future primary school teachers to possess a high level of professional preparation, a deep understanding of the capabilities of modern technologies, and the ability to apply them effectively within their pedagogical activities.

This approach contributes to the development of future primary school teachers' independent learning activities, the formation of competencies necessary for effective work within digital educational environments, and the support of their continuous professional development.

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