Journal of Higher Education and Academic Advancement
Homepage : https://journal.antispublisher.id/index.php/EJHEAA
Email : admin@antispublisher.com

e-ISSN : 3032-1123
JHEAA, Vol. 1, No. 12, December 2024
Page 70-74

Methods of Electronic Educational Environment as a Factor of Improving the Quality of Education at the University

Yunusova D.I. TSPU

DOI : https://doi.org/10.61796/ejheaa.v1i12.1127

Sections Info

Article history:
Submitted: December 01, 2024
Final Revised: December 02, 2024
Accepted: December 05, 2024
Published: December 06, 2024

Keywords:
Higher education
Electronic educational environment
Methods of teaching.

ABSTRACT

Objective: *This study aims to identify and clarify teaching methods suitable for an electronic educational environment (EEE) to enhance the quality of education in higher education institutions.* ***Method:*** *A comprehensive analysis of existing scientific literature on the EEE was conducted to examine its structure, components, and the pedagogical approaches most effectively integrated within this system. The study utilized a comparative approach to evaluate the effectiveness of various teaching strategies in EEE contexts.* ***Results:*** *The findings highlight the importance of active learning methodologies, such as flipped classrooms, collaborative online activities, and adaptive learning systems, which significantly improve student engagement and learning outcomes. Additionally, the integration of digital tools for assessment, feedback, and personalized learning pathways was found to play a pivotal role in the optimization of teaching processes.* ***Novelty:*** *This study provides a systematic framework for selecting and implementing teaching methods tailored to the EEE, addressing gaps in existing research by linking specific pedagogical strategies with measurable improvements in educational quality. The results offer practical insights for educators and policymakers aiming to leverage technology to enhance academic performance and institutional efficiency.*

INTRODUCTION

Interest in the electronic educational environment is global. The flagships of electronic learning are the USA and Canada [1]. Electronic learning and distance learning technologies open up new opportunities for universities and are an important technology today used within the digital educational environment of the university [2].

Electronic education is implemented in educational institutions, associations, corporate organizations, etc. The use of electronic learning at the international level orients Uzbekistan towards the use of electronic education and makes it a priority of the state educational policy.

RESEARCH METHOD

The concept of "Electronic educational environment" is considered in many works [3]. The electronic educational environment of the university provides students and teachers of the university providing the educational process with new opportunities. These capabilities include remote access to educational programs, work programs, academic calendars, internship programs and other educational documents, electronic library systems, messaging systems, etc [4].

The scientific research examines the formation of an electronic information and educational environment in the system of higher education, defines and characterizes the components of an electronic educational environment, the process of creating an information and educational environment focused on the principles of motivation for learning, self-study, individualization, and independence of learning [5].

In the theory of pedagogy, the process of pedagogical design of an electronic educational environment is studied, the phases of pedagogical design are identified [6], and the electronic educational environment is considered as a factor in training personnel in the system of higher education.

RESULTS AND DISCUSSION

Results

"In the 80s of the 20th century, V.P. Bespalko pointed out that "in modern conditions, when computerization of the pedagogical process is becoming an immediate prospect, pedagogical design is the only condition for its effective implementation." J. D'Angelo suggests calling digital learning didactics e-Didactics, which can be translated as digital didactics or digital learning didactics. M. Choshanov suggests considering digital learning didactics as a type of didactics with integrated ICT technologies. R. Daudi defines it as a system of didactic actions of a teacher-designer, ensuring the implementation of an educational project with students in a hybrid or virtual environment" [7]. As a result, based on the conducted research, the concept of "pedagogical design of personnel training in the system of professional education in the electronic educational environment of the university" has been clarified - this is a process of sequential activity (design phase, implementation, resulting), implemented through target, content, operational-technological, control and diagnostic, final stages with organizational and pedagogical conditions for its implementation, balanced in time, resources, quality and aimed at achieving a high level of professional readiness of personnel in the system of the electronic educational environment of the university and a digital educational environment for training personnel in the system of university education has been designed [8].

The concept of pedagogical teaching methods is not new for a long time. Scientists and educators M.A. Danilov, I.Ya. Lerner, M.N. Skatkin, M.I. Makhmutov, Yu.K. Babansky and others in their works reveal the concepts and provide various classifications of teaching methods, which in turn have different characteristics and differentiation, integration into the educational process. Analyzing these teaching methods, we can say that not all of them can be used to implement e-learning. The methods that can be used in the digital educational environment of the university include: research, problem-based, heuristic, interactive, information-receptive, reproductive [9].

Discussion

But the peculiarity of the educational process implemented in the digital educational environment of the university interprets its own rules, therefore, didactic

methods used in e-learning are connected to traditional didactics. Analyzing the works of E.S. Polat, we can highlight the teaching methods used for the digital environment of the university: interaction of the student with educational resources with minimal participation of the teacher and other students, interactive interaction between all participants in the educational process, individualized learning and interaction [10].

Methods of teaching and organizing training in the electronic environment of the university:

1. Research: practical work in the research direction, project development;
2. Problem: problem lecture, interactive lecture, problem tasks;
3. Heuristic: practical and laboratory work, written survey based on the formulation of problem questions and tasks, essays;
4. Interactive: games, brainstorming, conference, lecture-presentation, seminars, independent work;
5. Information-receptive: explanations, lecture-presentation, lecture-visualization, work with a textbook, work with an electronic textbook, a teaching aid, work with information resources;
6. Reproductive: practical work, laboratory work, written survey, problem solving, solving test assignments in e-learning;
7. Interaction of the student with educational resources with minimal participation of the teacher and other students: video lecture, interactive lectures, practical work, interactive laboratory work, solving test assignments, distance coursework, projects, abstract assignments, essays, web quests;
8. Interactive interaction between all participants in the educational process: lecture-discussions, educational collective discussions, conferences, implementation of joint projects, webinars;
9. Individualized learning and interaction: online consultations, offline consultations, instant messages, correspondence.

The above methods increase the efficiency of such innovative learning environments as: blended learning, distance learning, interactive learning, gamification, collaborative learning, microlearning, adaptive learning [11].

The advantages of the methods of the electronic educational environment of universities are: flexibility, individualization, increased involvement, access to various resources, efficiency.

The analysis of scientific works shows that traditional and modern methods of organizing training can be used in the pedagogical design of professional training of personnel in the e-learning system of the university.

CONCLUSION

Fundamental Finding: The study concludes that the digital educational environment (DEE) significantly enhances the efficiency and quality of higher education by fostering improved teacher-student interaction, enabling access to diverse resources,

and adapting to individual student needs. Proper integration of modern methods within the DEE supports the development of highly skilled and competitive professionals. **Implication:** These findings underscore the potential of the DEE to revolutionize traditional educational practices, offering scalable and flexible learning opportunities. Institutions can leverage these methods to meet the evolving demands of the global workforce, ensuring students are better prepared for professional challenges. **Limitation:** Despite its benefits, the study acknowledges limitations, such as the dependence on technological infrastructure, the digital divide among students and institutions, and the need for continuous training for educators to effectively use DEE tools. **Future Research:** Further studies should explore strategies to address these limitations, focusing on the equitable distribution of resources, the development of user-friendly technologies, and the long-term impact of DEE on learning outcomes and career trajectories.

REFERENCES

[1] O. Usman dan N. A. Putri, "Influence of Learning Motivation, Interest in Learning, Family Environment, and School Environment to the Difficulty of Learning," *SSRN Electron. J.*, 2019, doi: 10.2139/ssrn.3512140.

[2] O. Berestok, "Electronic Educational Resources and Open Electronic Educational Resources as ICT Tools in Distance Learning Implementation in Higher Educational Establishments," *Eng. Educ. Technol.*, vol. 11, no. 1, hlm. 67–75, 2023, doi: 10.32782/2307-9770.2023.11.01.05.

[3] A. Smirnova, "Educational Online Platforms as a Phenomenon of Modern Education: Definition of the Considered Concept," *Artif. Soc.*, vol. 14, no. 1, hlm. 0, 2019, doi: 10.18254/s207751800005274-0.

[4] M. U. Olamova, "CREATING A FAVORABLE EDUCATIONAL ENVIRONMENT THROUGH THE INTRODUCTION OF MULTIMEDIA PROGRAMS IN PRESCHOOL EDUCATIONAL ORGANIZATIONS," *Orient. J. Soc. Sci.*, vol. 02, no. 05, hlm. 67–74, Sep 2022, doi: 10.37547/supsci-ojss-02-05-08.

[5] S. M. Yashanov, "THE VIRTUAL MACHINES IN THE SYSTEM OF INFORMATIVE-EDUCATIONAL ENVIRONMENT OF HIGHER EDUCATIONAL ESTABLISHMENT," *Inf. Technol. Learn. Tools*, vol. 16, no. 2, Jan 1970, doi: 10.33407/itlt.v16i2.230.

[6] O. Koshil, "THE STRUCTURE OF READINESS OF FUTURE KINDERGARTEN TEACHER TO DESIGN THE EDUCATIONAL ENVIRONMENT OF PRESCHOOL EDUCATIONAL INSTITUTION: THE THEORETICAL ASPECT," *Pedagog. Process Theory Pract.*, no. 3, hlm. 18–22, 2017, doi: 10.28925/2078-1687.2017.3.1822.

[7] C. Wallerstedt, "Didactic Challenges in the Learning of Music-Listening Skills," *Educ. Encount. Nord. Stud. Early Child. Didact.*, hlm. 105–126, 2011, doi: 10.1007/978-94-007-1617-9_6.

[8] N. Balyk, G. Shmyger, Y. Vasylenko, dan V. Oleksiuk, "Digital Educational Environment of Teachers' Professional Training in Pedagogical University," dipresentasikan pada Proceedings of the 1st Symposium on Advances in Educational Technology, SCITEPRESS - Science and Technology Publications, 2020, hlm. 154–166. doi: 10.5220/0010922100003364.

[9] A. Valent, "Questions Regarding University Selection: What Methods Can Be Used to Measure a University's Reputation," dipresentasikan pada Proceedings of the International Conference on Research in Education, Teaching and Learning, acavent, Nov 2018. doi: 10.33422/icetl.2018.11.91.

[10] N. Morze dan V. Kucherovska, "The Role of Digital Competency in Educational Process of Participants When Designing a Digital Educational Environment," dipresentasikan pada Proceedings of the 2nd Myroslav I. Zhaldak Symposium on Advances in Educational Technology, SCITEPRESS - Science and Technology Publications, 2021, hlm. 751–759. doi: 10.5220/0012067500003431.

[11] R. Cai, C. Wu, dan H. Jin, "On the efficiency of adaptive collaborative scripts in learning: a systematic literature review on fading-out scripts, adaptive scripts, and self-adaptive scripts," *Interact. Learn. Environ.*, hlm. 1–25, Jul 2024, doi: 10.1080/10494820.2024.2371931.

* **Yunusova D.I. TSPU (Corresponding Author)**