

DIGITAL LEARNING ENVIRONMENT IN EDUCATIONAL INSTITUTIONS CREATION MODELS AND THEIR POSSIBILITIES

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Abstract

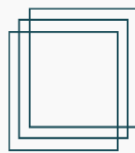
This study is dedicated to the analysis of models and their possibilities aimed at creating a digital learning environment in educational institutions. In the process of creating a digital educational environment, PEST and SWOT analysis technologies were used to ensure the compatibility of technological, pedagogical and methodical supplies. In the process of research, suitable digital environment models for educational institutions were determined and their efficiency indicators were evaluated. The results made it possible to determine the priorities, problems and opportunities in the implementation of the digital educational environment.

Keywords: Digital educational environment, PEST-analysis, SWOT-analysis, educational technologies, models, innovative education, pedagogical integration, ICT, efficiency.

Introduction

Creating a digital environment is a pressing issue for educational institutions today. This process is becoming more important due to the widespread use of digital technologies in society, the formation of an information-based economy, and the need to increase the global competitiveness of education. The main purpose of creating a digital environment in educational institutions is to improve the quality of education by creating an effective, comfortable and modern learning environment for pupils and students. The formation of a digital environment creates an opportunity to facilitate the transfer of knowledge, automate the educational process, and introduce new innovative approaches.

The use of digital technologies in the educational process is an important factor in improving pedagogical methods, improving the quality of education, and increasing students' interest in the educational process. In particular, digital environment tools expand the possibilities of distance education and ensure that students can participate in the educational process in a flexible and interactive way.



For example, electronic learning platforms, virtual laboratories and multimedia textbooks make the learning process more lively and effective. Thus, the implementation of the digital environment leads to positive results not only in the pedagogical, but also in the economic and social spheres.

This research is aimed at studying the appropriate models for creating a digital environment in educational institutions. The main focus is on determining the advantages and limitations of these models through PEST and SWOT-analyses. One of the important directions of this research is to understand how the specific features of digital environment models are important in organizing the educational process. In this process, effective use of global experience and local opportunities is envisaged.

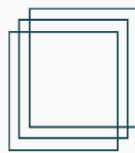
In addition, within the framework of the research, the attitude of educational institutions to the external environment and the possibilities of using this environment were studied through PEST-analysis. The SWOT analysis served to identify internal resources and obstacles in the process of creating a digital environment. By studying these models, it is intended to show what approaches can be effective to ensure the effectiveness of the digital environment.

Results and Methods

One of the most important issues facing the educational institutions operating in our Republic today is the ability to choose a model that ensures the creation of a digital educational environment and is effective for the educational institution within the framework of the technological support of the process.

There are several models for creating a digital educational environment that can be chosen by each educational institution, and when choosing one of them, the existing material and technical base of the educational institution, the potential of having competent pedagogic staff are taken into account.

In order to cope with the strong competition in the education system in the current environment, every educational institution pays special attention to offering students a digital learning environment that is convenient for them and can guarantee high quality of education. In this direction, a group of researchers has also developed models that shed light on the essence of the process aimed at creating a digital educational environment. In particular, A.V. Gluzman and R.R. Timirgaleeva offer the following model for creating a digital learning environment in an educational institution. According to their approach, creating a digital learning environment in an educational institution is based on the principles of digital thinking, flexibility, person-centeredness and open culture, having effective workplaces, based on available information. represents the essence of practical action aimed at making decisions, establishing cooperation, and successfully introducing innovations into the educational process.



Agreeing with the opinions of these authors, it is appropriate to mention the need to fill this model with the following principles: integration, communicativeness, mobility, interactivity, creativity, critical approach, sympathy for innovative ideas, openness to any innovations, virtual reality. These principles complement the principles of digital thinking, flexibility, person-centeredness, and open culture identified in the model, as well as the pedagogical conditions of productive workplaces, data-driven decision-making, collaboration, and innovation. complementing the quality indicator with monitoring guarantees quality education for students who use the services provided in the educational institution.

According to the researches of K. A. Tatarinov, Ye.G.Orlova, currently, in the practice of world pedagogy, models that represent the creation of a digital educational environment in educational institutions and have practical value are used. During the research period, along with the content analysis method, attention was paid to the creation of technological support for the creation of a digital educational environment in HEIs using PEST-analysis and SWOT-analysis technologies. With the help of these methods, taking into account the internal capabilities of the educational institution, the ability to create a digital educational environment in the educational institution was evaluated.

PEST-analysis is a technology that serves to develop a strategy that determines the development perspective of any company (institution, firm, association, association, corporation, etc.). In essence, the concept of "PEST" is a conditional abbreviation (abbreviation), based on four independent terms:

the policy conducted by the educational institution (the main priority ideas, the content of its internal and external activities (organizational policy - Politics (P);

economic activity of the educational institution - Economics (E);

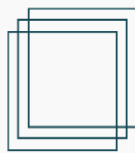
socio-cultural activity of the educational institution Socio (S);

technological activity of the educational institution Technology (T). PEST-analysis helps to develop a development strategy by studying the factors that form the basis of political, economic, socio-cultural and technological activity of an educational institution.

Several factors are mainly taken into account when using the PEST-analysis technology in pedagogical, psychological and sociological research.

During the research period, the possibility of creating a digital educational environment in the educational institution was studied using the SWOT analysis method, and the current situation was evaluated.

The SWOT analysis method was founded in 1963 by Professor Kenneth Andrews of Harvard University (USA). In 1965, Kenneth Andrews, together with his three colleagues, founded a company



A significant SWOT analysis was based on technology.

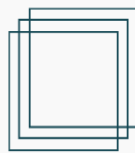
The SWOT analysis, like the PEST analysis, serves to study and analyze the factors that ensure the company's success. In this case, the SWOT-analysis, different from the PEST-analysis, considers the company's capabilities not from the point of view of its activity (politics, economic, socio-cultural and technological activities), but from the perspective of four important factors that affect the organization of activities - strong and analytically evaluated on the basis of weaknesses, opportunities that ensure success, obstacles that pose risks.

This technology also serves to develop a strategy that defines the development perspective of the company. In essence, the concept of "SWOT" is a conditional abbreviation (abbreviation), based on four independent terms: strength - S (strengths); weak aspect – W (weaknesses); opportunities – O (opportunities); obstacles are composed of T (treats).

In many cases, SWOT-analysis is carried out by firms and companies engaged in entrepreneurship in order to gain a place in the market, to study demand and supply. This is mainly based on the following basic conditions: ownership of the brand/image; corporate governance; having qualified employees and a working team; possession of experience/management experience; highly qualified employees; type of product/service; product design; product/service quality; organization of processes/processes; location of the company; logistics; funds/financial status.

During the period of conducting the research, on the example of an educational institution with experimental areas, the conditions of the educational institution that allow the effective creation of a digital educational environment were studied using the SWOT analysis technology. According to the independent approach of the researcher in conducting the research, a scale for evaluating the level of creation of the digital educational environment in the educational institution was developed. This scale serves to evaluate the legal, technological and methodical support level of the educational institution in order to effectively create a digital educational environment in the educational institution in accordance with the 5-point system.

The results of the experiment show that the educational institution's possession of a model for creating a digital educational environment ensures that this process is consistent and effective. At the same time, world pedagogy has many models for creating a digital learning environment in an educational institution. Among them are ICT-based teaching (i.e. computer education), teaching based on a reformed class (group), hybrid (blended) education, education based on the creation of educational projects, games based (or gamified) learning, problem-based learning, connective learning (or experiential learning) and networking learning) models are widely popular. Each educational institution has the opportunity to choose one of these models for creating a digital learning environment. In addition, an educational institution can independently develop a model for creating a digital educational environment. In this,



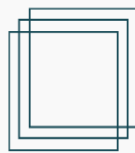
its economic potential and the potential of competent pedagogic personnel are of great importance.

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CONCLUSION

The SWOT analysis proved to be effective in identifying internal opportunities and obstacles. For example, the availability of digital infrastructure and the competence of the employees of educational institutions can be evaluated as internal strengths. At the same time, factors such as financial limitations or lack of readiness of employees for digital technologies were noted as internal barriers. These analyzes indicate the need for additional resources and strategies to successfully implement digital environment models. Also, the introduction of digital environment models makes it possible to use new innovative methods in the educational process. For example, the implementation of interactive lessons, virtual laboratories and digital multimedia platforms makes the educational process lively and interesting. In addition, the effective use of electronic



resources accelerates the process of students' learning and expands their opportunities for independent study.

In short, digital environment models create opportunities to improve the quality of the educational process, increase students' interest in the learning process, and introduce pedagogical innovations. Therefore, it is necessary for educational institutions to use scientifically based approaches to this process. This is one of the strategic steps aimed at improving the quality of education and meeting international standards.

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