HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

THE IMPORTANCE PEDAGOGICAL DESIGN USE OF DIGITAL TECHNOLOGIES IN CLASSROOM AND AND EXTRACURRICULAR ACTIVITIES

Suvonova Lobarxon Islom qizi
Navoi Innovation University
Department of Social and Humanitarian Sciences
Acting Associate Professor, PhD in Pedagogical Sciences

Abstract

This article provides a scientific and theoretical analysis of the importance of pedagogical design in the use of digital technologies in classroom and extracurricular activities. The effectiveness of applying modern information and communication technologies in the educational process is highlighted. The essence of pedagogical design, its functions, and its role in improving the quality of education are revealed. In addition, information is provided on modern pedagogical models such as ADDIE, SAM, and Agile Learning Design. The transformation of teacher and student activities in the digital learning environment, as well as the advantages of interactive methods, are also discussed.

Keywords: pedagogical design, digital technologies, classroom activities, independent learning, ADDIE model, distance learning, interactive methods, quality of education, digital learning environment, innovative pedagogy.

Introduction

In modern education, significant changes are taking place due to new tasks and teaching conditions, including the implementation of digitalization processes, global transformations, and the specific characteristics of the new generation. Therefore, pedagogical design has become highly relevant in all segments of education, where teaching systems are being organized or restructured based on modern principles. The term “design” originates from the English word “design,” meaning “construction” or “planning.” Pedagogical design (English: instructional design) refers to the process of creating and modeling educational solutions. [3, p. 68] The concept of pedagogical design is dynamic in nature. Specialists working in this field are often referred to not only as pedagogical designers but also as methodologists, since modern approaches recognize the student as an active participant rather than a passive recipient of knowledge. The foundations of pedagogical design were formed in the 1950s. In 1954, behaviorist psychologist B.F. Skinner published “The Science of Learning and the Art of Teaching,” and in 1956 Benjamin Bloom developed the well-known “Taxonomy of Educational Objectives,” now widely known as Bloom’s Taxonomy. In 1965, Robert Gagné described the “Nine Events of Instruction,” which significantly influenced modern pedagogical design and instructional methodology.

In the 1990s, early forms of electronic learning emerged (based on CD technologies). During this period, rapid prototyping practices were also introduced into educational content development, allowing learning materials to be produced quickly and improved through testing and iteration. Between 2000 and 2010, online learning expanded significantly. As a result, pedagogical design evolved rapidly, drawing on pedagogy, psychology, analytics, and neuroscience. In this context, it became important not only to structure content sequentially but also to design the learner’s educational experience. [8, p. 34] This approach is known as Learning Experience Design (LXD). A new professional field—learning experience designer—has also emerged, which focuses not only on content design but also on the overall learning environment and interactions among participants. [7, p. 102]

Research Methodology

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

Based on methodological principles and approaches, pedagogical designers develop scenarios for online courses, with special attention given to asynchronous learning materials. In general, pedagogical designers may develop classroom sessions, blended learning programs, educational resources, and entire course structures. They determine the type of content included in the course, its complexity level, sequencing of topics, and delivery format (video lectures, texts, synchronous or asynchronous sessions). They also define types of exercises and tests, course duration, and the structure of learning modules. Most importantly, the course must be engaging, appropriately challenging, and practically useful for learners.

Modern pedagogical designers must also understand product-based approaches, including audience analysis, performance metrics, and workflow organization. Therefore, this profession integrates multiple disciplines and represents a complex activity. The foundation of pedagogical design includes theories such as behaviorism, constructivism, cognitivism, and social cognitive theory. Designers do not work randomly but instead select appropriate methods, formats, and tools based on learning objectives, learner characteristics, and available resources.

From this perspective, every university lecturer is responsible for developing educational modules. Teachers with digital competencies can effectively organize teaching and learning processes. Instructional design commonly uses models such as ADDIE and SAM, while others focus on motivation design such as ARCS-V and SSDL. The ADDIE model (Analysis, Design, Development, Implementation, Evaluation) is the most widely used instructional design framework. The SAM (Successive Approximation Model) is an iterative model based on agile principles, which also underpins Agile Learning Design (ALD).

Digital technology-based learning environments increase student engagement. Multimedia tools, electronic platforms, virtual laboratories, mobile applications, and artificial intelligence technologies enable visual, interactive, and accessible learning experiences. Research shows that visual and interactive tools can increase knowledge retention by 35–40%.

Pedagogical design in classroom activities:

- actively engages students in the learning process;
- ensures individualized learning approaches;
- develops critical and creative thinking;
- fosters collaboration skills.

Platforms such as Moodle, Google Classroom, and Microsoft Teams allow teachers to organize materials systematically, create assessments, monitor independent learning, and provide real-time feedback. In extracurricular activities, pedagogical design becomes even more important, as students must manage their own learning processes. Therefore, step-by-step task design, motivational elements, and interactive tools are essential.

Independent learning designed through pedagogical principles:

- develops autonomous learning competence;
- improves time management skills;
- increases effectiveness of distance learning;
- enhances self-regulation skills.

The ADDIE model involves the following stages:

1. Analysis of learners' needs;
2. Definition of learning objectives;
3. Development of digital learning materials;
4. Implementation of the learning process;
5. Evaluation of outcomes.

HSR (LONDON),
HOUGHTON STREET REVIEW JOURNAL
ISSN: 2058-5519|Impact factor-15.9
http://houghtonstreetreview.com/index.php/hsr

Modern approaches such as SAM, Agile Learning Design, and Learning Experience Design (LXD) further improve digital education environments. According to researcher T. Noskova, the digital learning environment has become a new object of pedagogical activity. Indeed, digital technologies are transforming teachers into learning process designers and managers rather than mere content deliverers.

Pedagogical design is particularly important in foreign language teaching. Communicative approaches, interactive exercises, audiovisual materials, virtual communication platforms, and gamification elements significantly improve learning outcomes. Studies show that digital language learning environments develop communicative competence faster than traditional methods.

Conclusion

In conclusion, pedagogical design in the use of digital technologies in classroom and extracurricular activities is a key factor in improving educational effectiveness. It modernizes educational content, systematizes the teaching process, and encourages students' independent and creative thinking. Therefore, modern teachers should not only be subject experts but also specialists in pedagogical design and digital technologies.

LITERATURA

[1] Noskova T. Didactics of the Digital Environment. Moscow, 2019.
[2] Muslimov N., Abdullaeva Sh., Khodjaev B. Pedagogical Competence and Innovative Educational Technologies. Tashkent, 2016.
[3] Andreev V. Higher Education Pedagogy. Kazan, 2013.
[4]Polat E.S. Modern Pedagogical and Information Technologies in Education. Moscow, 2010.
[5] Selevko G.K. Modern Educational Technologies. Moscow, 1998.
[6] Ziaziun I.A. Pedagogical Mastery of the Teacher. Kyiv, 2019.
[7] Muslimov N.A., Usmonboyeva M.H. Innovative Educational Technologies. Tashkent, 2021.
[8] Vygotsky L.S. Thought and Speech Psychology. Moscow, 2018.
[9]Branch R.M. Instructional Design: The ADDIE Approach. Springer, 2020.
[10] Karimova V.M. Modern Pedagogical Technologies and Pedagogical Skills. Tashkent, 2021.