UDC 37:004.588; 004.85 DOI: https://doi.org/10.64076/iedc251206.14

Theoretical foundations for implementing an adaptive technology of instructional information design in foreign-language learning

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Abstract. *The article outlines the theoretical foundations for implementing adaptive instructional-information design in foreign-language learning. It highlights the need to modernize teaching in response to growing information demands, examines contradictions in educators' readiness to design instructional content, and emphasizes pedagogical technology as a systemic tool for optimizing learning.*
Keywords: *adaptive technology, instructional information design, pedagogical technology, foreign-language learning, higher education.*

One pathway for introducing European norms and standards into education and science–through harmonizing provisions of the higher education system and sharing national achievements within the European Union–is to ensure a qualitatively new level of instructional information.

In Ukraine–which is actively integrating into the global community and developing international cooperation across sectors–interest in learning foreign languages has markedly increased. Consequently, demand for specialists in foreign languages has grown, as have the requirements for quality improvement, modernization of teaching methods, and the development and effective implementation of new methodologies. Of particular relevance is researching the theoretical and practical aspects of higher-education instructors' implementation of an adaptive technology for designing instructional information within their professional and pedagogical activity–one that organizes the delivery of learning content, ensures productive teacher–student interaction, and contributes to the formation of a new generation of professionals.

Findings from theoretical analysis and the practical experience of higher-education instructors reveal several contradictions in the design of instructional information.

a) between the social demand for professionally competent higher-education instructors–capable of appropriately designing and updating educational content, activating existing information, transforming it into instructional information, and achieving intended outcomes–and the current level of their readiness to design instructional information;

b) between the degree of teachers' personal and professional adaptability and the dynamics of the information reality;

c) between the growing volume of professional–pedagogical information and the continued reliance on traditional presentation technologies that do not sufficiently support competence-oriented navigation of today's information space;

d) between the increasing need to use pedagogical information in solving educational and professional tasks and the absence of necessary pedagogical conditions for this in higher-education institutions.

One way to overcome these contradictions is to develop instructors' project competence within the contemporary information space by technologizing professional activity: mastery of core technologies and the ability to work within clearly specified schemes frees time for creative exploration and the enhancement of pedagogical mastery. The interest to this study is the introduction, in domestic scholarship of the late 1970s–early 1980s, of the concept of pedagogical technology. At the time it was used as a synonym for the frequently encountered phrase in textbooks describing the combination of methods, forms, techniques, and organizational decisions in the joint activity of teacher and students to achieve instructional aims. Against the backdrop of the informatization of society, the traditional turn of phrase remained, while the newly introduced concept gained independent currency in pedagogical theory and practice, influenced as well by the wide circulation of the term technology in foreign pedagogy.

At the present stage of educational development, pedagogical technology functions as: a science that investigates the most rational pathways of instruction; a system of methods, principles, and regulators applied by professionals in implementing educational processes; the real, enacted process of learning; and a construction, strategy, and algorithm of teacher actions–an organization of pedagogical activity.

Overall, from the standpoint of professional activity, pedagogical technology is considered a systemic method for creating, applying, and evaluating the entire process of teaching and learning, taking into account technical and human resources and their interactions, with the aim of optimizing educational forms.

Grounding the learning process in project orientation, I.P. Pidlasyi defines pedagogical technology as a comprehensive pedagogical impact that makes it possible to obtain a pedagogical product of stipulated quantity and quality, in line with planned time, effort, and resource expenditures–in practice implying clear commitments by the instructor to guide a learner to a defined level of mastery within specified conditions.

A number of classifications of pedagogical technologies have been proposed based on instrumentally significant features. In the context of this study, those most widely used in global practice include: information technologies, information-and-communication technologies, technologies for informatizing the learning process, and the project method. These categories do not exhaust the spectrum of technologies developed by practitioners; so-called authorial technologies combine elements of tested approaches in various ways and are oriented toward the aims and content of a specific learning process.

To conduct an experimental evaluation of the research problem, we propose a technology for designing instructional information by higher-education instructors within their professional–pedagogical activity.

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