



## The Methodology of Using New Generation Educational Literature in the Educational Process

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### **Abstract**

In this age of development, it is increasingly important to educate young people so that they are intellectually mature, well-rounded, and well-rounded. Youth remain contemporary and progress forward. Presently, the need to educate our youth in an innovative fashion is emerging as a pressing concern. For his benefit, a new generation of educational literature must be produced. The Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan concurrently authorized No. 387 “On approval of State educational standards and curricula of higher education courses and specialties developed in accordance with the updated classification” on September 16, 2011. This suggests that considerable emphasis should be placed on the revised classifier. This article examines how newly established educational paths contribute to the production of a novel iteration of educational literature.

**Keywords:** *New Generation; Electronic Educational Literature; Educational Literature; Educational Process; State Educational Standards; Continuous Education System; Pedagogic Educational Field; Pedagogical Technologies; Information Technologies; Communication Technologies*

### **Introduction**

For the purpose of training personnel who are capable of autonomously resolving future professional and personal challenges, it is critical to furnish the educational process with textbooks and literature of the most recent generation, which have been developed utilizing cutting-edge pedagogical, information, and communication technologies.

Determining the principles and preparation mechanisms for a new generation of educational literature for all types of education in the continuous education system is the objective of the concept of creating a new generation of educational literature for the continuous education system [1].

Classical perspectives and educational approaches have become antiquated in the contemporary, fast-paced world. It is imperative in life to remain current in all areas. An imperative concern of the present is the development of a fresh generation of textbooks and manuals to be utilized in educational institutions for the instruction of all general subjects.

Efforts have been made to enhance the training of specialists with practical skills, update the content of textbooks, training manuals, and teaching-methodical sets, and develop electronic textbooks

for the subjects encompassed in the new educational areas, in accordance with the state educational standards of educational domains within the field of pedagogy [2].

The aforementioned factors influenced the development of the state educational standard, science program, teaching methodology, didactic requirements, pedagogical technology, and complex (systemic) approach. Additionally, they facilitated the introduction of innovations in the economic and social domains and ensured comprehensive coverage of the most recent advancements in science, technology, and technology. The learners themselves generated a new generation of modern educational and teaching–methodological literature, which enables flawless mastery of pertinent subjects. Developing and broadly applying a new generation of modern educational and teaching–methodological literature is one of the primary solutions to this challenge.

Aspects of pedagogy and the development of textbooks and educational literature of the next generation The work of Yu.K. Babansky, M.A. Danilov, B. P. Esipov, S.R. Rajabov, Kh.I. Ibragimov, Ya.I. Lerner, R.A. Mavlonova, F.R. Yuzlikaev, B.R. Adizov, N. Shodiev, Sh. Mardonov, Sh. Khalilova, N. Egamberdieva, J. Hasanboev, and Sh. Abdullayeva addressed various issues related to the development of effective technologies for training future teachers, innovative approaches to teacher preparation, and the challenges associated with the establishment of contemporary educational institutions. On the basis of mechanisms, a methodical approach guided by the principles of pedagogical technology and the laws of dialectics, challenges pertaining to the development of scientific training sessions for the next generation were established.

Mental health considerations were addressed in the development of textbooks and educational materials for the next generation by M.G. Davletshin, V.V. Davydov, N.V. Kuzmina, E. Ghoziev, V.M. Karimova, R.I. Sunnatova, and N.S. Safaev. The psychological aspects, the rules and principles of didactics, young psychological and psychoanalytical rules, and the didactic requirements for developing a new generation of instructional and teaching–methodical literature, in addition to the independent study of science and the cultivation of students’ capacity for scientific thought, are regarded as sources based on an analysis of their works.

In order to elucidate the content, essence, purpose, and tasks of pedagogical technology, which serves as the foundation for the development of new generation educational literature, it is imperative to draw upon the insights of renowned foreign pedagogic scholars such as T. Sakomoto, B.S. Bloom, S.W. Cobb, P.H. Douglas, G. Pimbley, among others. Additionally, the contributions of pedagogic scientists from CIS, namely B.P. Bepalko, V.M. Monakhov, A.A. Leontev, S.A. Smirnova, and other esteemed pedagogues, should be considered in addressing the challenges associated with enhancing pedagogical technology and its application in the educational process. Furthermore, the perspectives of pedagogic scientists from our own country, including N.N. Azizhojayeva, R.H. Jorayev, J.G. Yoldoshev, U.N. Nishonaliyev, O.K. Tolipov, M.A. Ochilov, and N.S. Saidahmedov, are also of great significance in this regard. Based on an examination of the scholarly contributions of N.A. Muslimov and the practical implementation of pedagogical technology in the educational context, as well as the development of a science training program, this study focuses on the theoretical underpinnings of educational literature creation in higher education. The present study addresses the methodological foundations underlying the development of science curricula and literature at the undergraduate level. It also explores the principles of pedagogical technology and their application in the design of the educational process.

Notable scholars in the field of mathematics education have examined methodological aspects of instruction in academic institutions. These scholars include J.I. Ikramov, N.R. Gaybullaev, G.V. Zlotsky, S. Alikhanov, Yu.I. Kalyagin, E.U. Medeuov, R.S. Cherkasova, V.I. Mishin, P.M. Erdniev, Ch. Mirzaev, A.G. Mordokovich, G.I. Sarantsev, T. Tolaganov, M. Tojiev, D. Yunusova, B. Abdullaeva, M. Raemov, N. Eshpol. The scientists previously mentioned made significant contributions to the advancement of

mathematics teaching methodology. Specifically, they were involved in the development of a systematic approach to teaching the subject matter and incorporated “Mathematics teaching technologies and design” into the recently introduced “Mathematics teaching methodology” educational direction. They also devised training projects for the subject and formulated its teaching methodology using methodological considerations.

The research conducted by A.A. Abduqadirov, M. Aripov, U.Sh. Begimkulov, F.M. Zakirova, N.I. Taylakov, Sh.S. Sharipov, U.Yuldashev, and A.G.Hayitov focuses on the integration of information and communication technologies (ICT) in education. These technologies are considered as a crucial component of pedagogical strategies employed in the development of modern educational literature. The scholars also explore the design and implementation of multimedia teaching programs that leverage contemporary information technologies as educational tools. Methodological considerations regarding the utilization of ICT in pedagogical education are examined, with particular emphasis on the application of these technologies in newly established educational domains. The electronic textbook “Mathematics teaching technologies and design” is utilized as a valuable resource for developing teaching methodologies and fostering independent learning skills among students in these emerging educational fields.

The definition of educational literature was derived from the analysis presented above. Educational literature, including didactics and foreign translations, is a valuable resource that imparts essential knowledge derived from pertinent curricula for the subjects specified in the curriculum of a particular form of education (field or specialty) [3]. It also comprises methods of learning and didactics.

Electronic educational literature (E-literature) is a multifunctional resource that utilizes contemporary information technologies to gather, describe, update, store, and present knowledge in an interactive format [3].

The primary prerequisite for the development of a novel generation of educational literature is that such literature be integrated into a continuous education system in accordance with the national personnel training model and approved state educational standards (or state requirements) for the various types of education. Furthermore, such literature must demonstrate the interconnectedness between the subjects covered in that particular type of education and those covered in other types of education. It is assembled by guaranteeing the logical consistency of the subject’s educational curricula [3].

The development of principles for the creation of a new generation of educational literature in emerging educational areas within the field of pedagogy, as well as the mechanisms involved in their preparation, has been the outcome of thorough analysis and drawing from the most effective experiences. Additionally, methodological foundations have been established for the creation of subject programs and literature falling under the category of “Teaching technologies and design” [5]. The user’s text is already academic and does not need to be rewritten. At the undergraduate level of tertiary education, a methodical system for teaching the topic “Mathematics teaching technologies and design” was developed, based on the project of educational training of the subjects and the principles of pedagogical technology. The educational activities pertaining to the subject “Mathematics teaching technologies and design” were specifically prepared for the students. The underlying concepts of pedagogical technology, which serve as the foundation for the development of a new era of educational literature, were utilized as the framework for formulating the plans for educational initiatives. In specific:

The initial step is to develop a training endeavor beforehand. The educational process in this instance is structured according to a hierarchy of volume and content; it is subdivided into “The Biggest”, “Big”, “Medium”, and “Small” modules, with designated time slots and educational objectives for each module being established. The fundamental concepts are identified among the knowledge imparted via micro-modules in the training, along with the training format that will implement this knowledge for students, the pedagogical

approaches, information and communication technologies, and didactic resources utilized in each micro-module, and their respective applications are described.

The second step is to implement the systematic approach principle. Naturally, throughout the development of these initiatives and the execution of the educational process, every regulation of the “Systematic Approach” principle of synergetics is adhered to. The development of pedagogical technology was grounded in the principles of systems theory.

The third is to adhere to didactics’ laws, regulations, and guiding principles. In developing the training and executing the education component of this endeavor, every didactic principle and rule is duly considered.

The fourth is to recognize the functional relationship between each element of the learning activity. “Learning objectives and allotted time”, “Knowledge system and fundamental concepts contained within it”, “Lesson type and classification”, “Pedagogical approaches”, “Information and communication technologies”, and “Didactic materials” are all considered to be integral components when designing a training session.

The fifth is to emphasize the autonomous acquisition of knowledge by students. When formulating and executing the educational process, pupils endeavor to locate the knowledge that is essential for their independent learning.

The sixth is that students implement, memorize, and comprehend information. By developing a training project and delivering instruction centered around that project, it is feasible to ensure that students comprehend the fundamental concepts, retain the information in their memory, and simultaneously implement it in practical settings.

Furthermore, the outcomes of the objectives are expressed as verbs. When devising a training session, the work activities that students will undertake are illustrated in each micro-module that comprises that particular session.

The eighth is to distinguish micro-modules from fundamental concepts. The knowledge imparted via micro-modules establishes fundamental concepts; on the basis of these concepts, control questions are formulated to assess students’ knowledge acquisition; the nature of the control is also ascertained.

The ninth objective is to assess the students’ level of knowledge acquisition at the conclusion of each training session. The determination of each student’s level of knowledge acquisition is contingent upon the assessment method and criteria implemented for a particular educational endeavor [4].

The theoretical and practical training initiatives for “Mathematics teaching technologies and design” were formulated in accordance with these principles. For the development of theoretical and practical training initiatives on a particular or any other educational subject, the following three categories of work were completed:

The initial endeavor. The compilation of general schedules of the subject “The teaching technologies and design of mathematics”, for this, the following tasks are performed:

Initially, “Mathematics teaching technologies and design” was conceptualized as an integrated unit comprising interconnected components; it was subsequently designated as the “The Biggest” module; and the overarching objective of this academic discipline was ascertained.

Furthermore, considering the coherent integration of subject matter expertise and the comprehensiveness of the concept, the instructional content was partitioned into multiple “Big” modules, each with its own set of objectives.

Moreover, objectives were established for the “Medium” modules comprising logically connected sets of knowledge that were to be imparted to students within a couple of hours and were contained within each “Big” module.

By following the aforementioned procedures, detailed timetables were formulated for this undertaking. Within these schedules, sub-modules were distinguished from the central module, followed by their respective objectives, allotted time, and the tasks that students were obligated to accomplish.

On the basis of the defined fundamental concepts of the separated sub-modules, control questions were developed, and their evaluation type and criteria were established.

The pedagogical approaches and training modalities implemented in each sub-module were determined and selected.

Illustrated were the locations and categories of information and communication technology and instructional materials utilized in each sub-module.

The development of each sub-module, the knowledge system they impart, the instructional approach utilized to teach them to students, and the overall training scenario encompassing pedagogical techniques, information technology, and didactic resources have been completed.

Methodological foundations for the production of new-generation educational literature can be established on newly opened educational directions, encompassing all subjects taught in academic institutions. Such mechanisms can be utilized to generate such literature.

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