

Managing the Process of Creating Next-Generation Textbooks for Specialized Subjects in Creative and Specialized Schools

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Abstract. This article analyzes the theoretical and methodological foundations and the current state of managing the process of creating next-generation textbooks for specialized subjects taught in creative and specialized schools. In particular, it examines issues related to taking account of subject-specific features in textbook development, shaping content aimed at developing students' creative abilities, and integrating a competency-based approach and innovative pedagogical technologies.

Keywords. creative schools, specialized schools, next-generation textbooks, specialized subjects, quality management in education, textbook development process, pedagogical innovations, competency-based approach, expertise and approbation, digital educational resources, educational management.

The rapid development of science and technology at the global level has made it necessary to create next-generation textbooks as an important tool of interactive education and to develop innovative didactic indicators for systematizing learning materials in learner-centered textbooks. In developed countries such as the United States, the United Kingdom, France, and Uzbekistan, particular attention is being paid to improving the pedagogical mechanisms for developing next-generation textbooks on the basis of systems integration, competency-based, and modular-credit approaches. In particular, in line with international assessment programs such as PISA, TIMSS, and

PIRLS, developing technologies for creating textbooks that foster reading, text comprehension, and creative thinking among students is becoming an urgent task.

Around the world, considerable research is being carried out on improving the didactic and methodological requirements for next-generation textbooks in general education subjects on the basis of continuity and succession, as well as on developing the organizational and functional structure of textbook creation through the integration of advanced pedagogical and information technologies. In systematizing learning materials in next-generation textbooks, it is important to fully take into account the pedagogical potential of the competency-based approach and to develop integrative requirements for textbook creation based on the use of benchmarking methods.

In our republic, creative schools and specialized schools were established in order to develop young people's intellectual and creative potential, create the necessary conditions to support and encourage gifted students, educate them as harmoniously developed individuals who are physically and spiritually healthy and devoted to the Motherland, and cultivate diligence, patriotism, selflessness, and the aspiration to become well-rounded people with a broad worldview. At the same time, it is highly important to organize comprehensive educational processes in these schools aimed at teaching students the rich creative legacy of our great ancestors and writers and preparing them to become worthy successors; to strengthen the material and technical base of schools; to improve systems for identifying, selecting, teaching, and educating gifted youth; to clarify the didactic functions of creating next-generation textbooks in line with STEAM education requirements; and to develop optimal mechanisms for systematizing educational materials. The Action Strategy for the Further Development of the Republic of Uzbekistan identified important tasks such as taking targeted measures to strengthen the material and technical base of educational institutions by equipping them with modern educational and laboratory equipment, computer

technology, and teaching and methodological manuals. This, in turn, requires improving the technology for creating next-generation textbooks in general education subjects and developing criteria and methods for evaluating textbook quality.

The results achieved in recent years in national and international subject Olympiads, as well as the medals being won, are highly encouraging. The achievements of the last two or three years are especially superior even to the results of the previous ten to fifteen years.

Every student who achieves the highest results in national and international Olympiads and returns home with medals, together with that student's teacher, is being rewarded with substantial financial incentives and a number of privileges. This helps create not only free competition among students, but also a healthy competitive environment among teachers aimed at achieving high educational outcomes.

Almost all students who are attaining high results in national and international subject Olympiads are students of Presidential schools, creative schools, and specialized schools—institutions with strong conditions and instruction from the most qualified teachers. The reason is that these schools are independent institutions fully equipped with modern facilities and textbooks; they employ teachers with international certificates; teachers are paid highly; and they are not burdened with excessive paperwork or ceremonial activities but work primarily for quality.

From the first years of independence until today, we have studied the experience of countries with developed education systems and spent billions of funds. Now, only by creating our own national education system will we be able to achieve even better results. This does not necessarily require the constant attraction of foreign personnel. We should study and disseminate the work of the devoted reform-minded staff of our national education system and listen to the proposals of scholars and teachers who can identify existing problems and show their solutions.

The main goals of modernizing the education system of Uzbekistan are connected with increasing access, quality, and efficiency in education, and this presupposes a significant renewal of its content. This, in turn, requires the development of a new generation of educational literature, because the textbook, as the main component of the educational process, puts educational content into practical effect.

In our view, creating next-generation textbooks first requires studying and theoretically understanding existing international experience in their development and identifying the scientific and pedagogical potential of educational literature from past years. Without studying and further developing existing experience in designing future-oriented curricula and textbooks, it is impossible to achieve educational continuity. At this stage, it is important to systematize the knowledge already obtained, study and generalize historically rich experience, and only then move toward the intended goal.

In this regard, while reviewing a presentation of next-generation textbooks developed for primary grades at the International Congress Center on December 29, 2022, the President of the Republic of Uzbekistan, Sh. Mirziyoyev, noted that from January 1, 2023, an experiment on introducing new textbooks would begin in schools in 14 regions of the republic, and from September 1 it would be launched in 10,000 schools.

Accordingly, active measures are being taken in our country to test Finnish educational programs and textbooks, publish new generations of educational literature, and involve specialists in the creation of qualitatively new textbooks.

Starting from the primary-grade textbooks being introduced experimentally in 14 regions of the country, educational programs and textbooks for grades 5–11 will also be developed in subsequent stages.

Today, the main focus in developing and preparing next-generation textbooks for publication is on ensuring that their content and quality meet international requirements.

For this reason, the experience of Turkey, a country with a developed education system, has been studied.

For example, the Turkish Ministry of National Education, which has extensive experience in the education system, oversees 60,000 schools serving a total of 18 million students.

To study advanced international experience, officials and specialists of the Agency for Specialized Educational Institutions visited Istanbul and Ankara to study the Turkish education system and practice for the purpose of developing modern educational and methodological literature for specialized boarding schools and specialized schools within the agency system. They familiarized themselves with the Turkish Ministry of National Education's Directorate of Textbooks and Publications, the ministry's publishing house in Izmir, and the activities of the METIKSAN and RITM publishing houses.

As a result of presentations delivered by responsible staff members of the Directorate of Textbooks and Publications—Umar Farrukh Turkhol and Nurjon Ishilchaylar—on the system for forming orders for textbooks, printing them, and delivering them, it was learned that the Ministry of National Education had created the “MEBBIS” electronic platform, through which educational institutions upload their textbook orders.

According to the analysis, beginning this year the printing enterprise located in Izmir, which ranks sixth in the world in terms of production, was placed under the authority of the Directorate of Textbooks and Publications, and educational literature is to be printed at that enterprise.

According to Turkish practice, 50 members of a commission responsible for quality control participate in the process of accepting educational literature from printing houses. During the acceptance process, the quantity of textbooks is checked first and

their quality second. In addition, the Department of Education and Upbringing, particularly the Department of Educational Programs and Instructional Materials, operates directly in the development of educational programs and textbooks.

At present, a total of 94 titles of educational literature are developed, covering children from age three (preschool age) through grade 12. The same textbooks are developed for all students in grades 1–8, while for grades 9–12 textbooks are developed according to specialization—natural sciences, exact sciences, social sciences, vocational education, sports, arts lyceums, Anatolian lyceums, and imam-khatib lyceums.

In Turkey, the practice of “free distribution of educational literature” was introduced beginning in the 2003–2004 school year. Free textbook delivery began for grades 1–4 in 2003–2004, for grades 5–8 in 2006–2007, for grades 9–12 in 2009–2010, and for private school students in 2014–2015. Since 2021–2022, all educational institutions throughout Turkey have been provided with free textbooks. In the 2022–2023 academic year, the average cost of printing and delivering textbooks amounted to 20–25 lira per student, or 9 billion lira in total.

Although authors, editors, and philologists are considered the primary parties responsible for textbook creation, working groups composed of specially responsible staff also operate to analyze state educational standards and curricula and to study whether the textbook corresponds to students’ psycho-physiological characteristics.

A special working group consisting of 32,000 pedagogues was prepared in order to prepare, review, and analyze textbooks created for educational institutions within the Ministry of National Education system.

The textbook draft prepared by the textbook authors is submitted to the ministry. These textbook mock-ups are then analytically reviewed by the working group and the ministry commission.

Textbook mock-ups are assessed on a 100-point scale based on criteria consisting of 200 items. A mock-up that scores above 75 points is accepted and returned to the creative team for further improvement.

The processes of studying, reviewing, and refining textbook mock-ups last for nine months, after which the completed textbook is submitted to the printing house for publication.

Textbooks should meet the following main requirements:

- they must not contradict existing laws;
- they must comply with approved educational programs;
- they must lead students to positive learning outcomes;
- they must conform to the literary norms of the Turkish language;
- they must be enriched with electronic resources and have a design that meets the required standards.

In Uzbekistan as well, the opinions of students, teachers, parents, and the wider public are considered important in the creation of next-generation textbooks. For this reason, electronic versions of textbooks being prepared for publication and teaching-methodological manuals are delivered to educational institutions for pilot testing in order to further improve and refine their content, design, and quality, and the textbooks are improved further on the basis of the comments and feedback received.

Ultimately, the well-founded proposals and comments being received on textbooks undoubtedly provide a new impetus for improving them in terms of content. This helps ensure more effective interaction between the education system and society in the creation of qualitatively renewed textbooks.

The changes introduced into newly published textbooks in our country include the following:

First, they are being prepared with students' age and psycho-physiological characteristics taken into account.

Second, repetition in textbook content is being eliminated, and changes are being made to textbook design and photo-illustrations on the basis of international experience.

Another important aspect is that interdisciplinary connections and continuity across grade levels are being ensured. Most importantly, the textbooks are being prepared on the basis of an innovative approach, with an emphasis on educational games, exercises, problems, and tasks aimed at developing students' logical thinking.

In addition, the content of informatics and information technology textbooks is being enriched with practical, creative, and logical tasks aimed at developing students' technical abilities. This is being carried out in line with the requirements of globally recognized STEAM technologies.

Developing a large-scale document such as a national curriculum that covers all levels and subjects of compulsory education is a difficult and costly process. Particular attention has also been paid to further improving the methodological support of the educational process in schools within the Agency for Specialized Educational Institutions system, in accordance with Presidential Decree No. PF-106 of April 14, 2022, "On expanding the network of specialized schools within the system of the Presidential Educational Institutions Agency," as well as Protocol No. 116 of the meeting chaired by the Prime Minister of the Republic of Uzbekistan on May 31, 2022, concerning the organization of the selection process for gifted students for creative schools, specialized schools, and specialized boarding schools within the agency system.

Likewise, under Presidential Decree No. PF-106 of April 14, 2022, one of the main tasks of the Scientific-Practical Center for Pedagogical Excellence and International Assessment under the Agency was designated as the development and procurement of

state educational standards, curricula, educational programs, and textbook sets for educational institutions within the agency system.

The task of developing the National Curriculum with the involvement of qualified pedagogues, researchers, psychologists, and foreign experts was defined by a presidential decree of November 6, 2020. In the Development Strategy of New Uzbekistan for 2022–2026 (Goal 42) and in the national program for the development of public education for 2022–2026, adopted by relevant presidential decrees, the full implementation of this program by 2026 is envisaged. The previous state educational standards for general secondary and specialized secondary education approved for 12-year education in 2017 lost legal force in 2021.

To implement the assigned tasks, 246 experts were involved in the development of curricula for 22 subjects, including schoolteachers, methodologists, university professors and lecturers, and experts from UNICEF and USAID. The National Curriculum defines the skills that students should develop in response to the demands of the twenty-first century. In addition, more than 600 specialists were involved to ensure continuity between school curricula and preschool, vocational, and higher education programs.

According to UNICEF's analysis of Uzbekistan's education sector, in addition to UNICEF and USAID, the British Council and other organizations also participated in the development of the National Curriculum; the process was carried out in several stages; and dozens of training sessions were organized for the specialists involved. UNICEF alone allocated the equivalent of 150,000 US dollars in 2020–2021 to support this reform.

Even developed countries with sufficient material and human resources do not create such documents frequently. For example, the national curriculum introduced in the United Kingdom in 1988 was revised only in 1994–1995, and even then no entirely

new curriculum was created; instead, the existing curriculum was edited in order to lighten educational content. The new national curriculum that remains in force today was introduced in 2014.

In Finland, the 2004 national curriculum was introduced in place of the curriculum developed ten years earlier. In Estonia, the only post-Soviet country to enter the top ten in the 2018 PISA international study, the national curriculum is likewise reviewed roughly once every ten years.

In 2019, USAID announced the start of a four-year program, “Education for Excellence in Uzbekistan,” with a budget of 29.5 million dollars. Within the framework of this program, Cambridge textbooks in English and Informatics were localized. In July 2022, these textbooks and manuals were pilot tested.

The most essential skills for a twenty-first-century person are critical and creative thinking, teamwork, and communication, and the curriculum is directed toward developing these skills.

In conclusion, on the basis of the National Curriculum, with UNICEF support, textbooks for grades 1–3 and 6, 7, and 10 were developed; with USAID funding, textbooks in native language, reading literacy, and mathematics for grades 1–4 were created; and physics and biology textbooks from Cambridge Publishing, localized by the Agency for Specialized Educational Institutions, were prepared.

As a result of the reforms of the last five years, the necessary political-legal, socio-economic, and scientific-educational foundations for building New Uzbekistan have been created in our country.

In addition, based on a deep analysis of complex global processes and of the development results achieved by our country, the Development Strategy of New Uzbekistan for 2022–2026, consisting of seven priority directions, was approved in recent years on the basis of the principle “From the Action Strategy to the Development

Strategy” and following broad public discussion under the principle “For Human Dignity.”

Goal 42 of the Development Strategy of New Uzbekistan for 2022–2026 provides for a complete review and practical introduction of curricula and textbooks based on advanced foreign experience by 2026.

In accordance with the National Curriculum, 699 titles are to be created by 2026, including 296 new textbooks, exercise books, teacher methodology books, and mobile applications in 2022 alone.

A system is to be introduced in general education schools for pilot testing textbooks and teaching-methodological complexes and for conducting expert review with the participation of foreign specialists.

These normative legal documents express the social demand placed by the state and society on the education system: a developing society needs modern, knowledgeable, ethical, and enterprising people who can make independent decisions in conditions of choice, forecast possible consequences, cooperate with others, display mobility, dynamism, and constructiveness, and possess a strong sense of responsibility for the fate of the country.

The introduction of new subjects into the curricula of New Uzbekistan and the need to renew educational content in those curricula make it necessary to actualize the mechanism for managing the process of creating next-generation textbooks for specialized subjects in creative and specialized schools.

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