



IMPROVING THE TEACHING METHODOLOGY OF THE COURSE “APPLICATION OF INFORMATION TECHNOLOGIES IN THE FIELD” AND PRACTICAL RECOMMENDATIONS

Khudoyberdiyev Abdumalik Dilmurodovich

Senior Lecturer of the Department of
Economics and Information Technologies,
ISFT Institute Samarkand Branch

Abstract: *This article analyzes the issues of improving the teaching methodology of the course “Application of Information Technologies in the Field” in the context of a digital educational environment. The study highlights the pedagogical possibilities of interactive teaching, project-based learning, digital platforms, and the use of modern information technologies. In addition, practical recommendations have been developed for increasing student activity, improving independent learning, and enhancing monitoring and reflection mechanisms. The structure of the course curriculum is methodologically analyzed, and methodological solutions for effective teaching based on the digital educational environment are proposed. The research results contribute to the formation of professional competencies among students and to increasing the effectiveness of the educational process.*

Keywords: *digital educational environment, teaching methodology, interactive learning, project-based learning, LMS platforms, independent learning, professional competence, digital tools, monitoring, reflection, pedagogical technologies, educational effectiveness.*

Improving the teaching methodology of the course “Application of Information Technologies in the Field” in the conditions of a digital educational environment is considered one of the urgent directions of the modern



pedagogical process. In this process, the content of education, methods, tools, and organizational forms are reconsidered and updated according to the requirements of digital transformation. Based on the methodological structure developed for this subject, improving the teaching methodology covers several important directions and is implemented with a student-centered approach.

One of the important directions of methodological improvement is the introduction of interactive teaching. In traditional teaching methods, the student mainly participates as a passive listener, whereas in the interactive approach the student becomes an active participant. The digital educational environment creates broad opportunities for ensuring interactivity. For example, organizing real-time question-and-answer sessions through online platforms, conducting virtual discussions, and applying interactive tests and simulations increase students' activity in the learning process. This practically implements the activity-oriented approach envisaged in the content-process block of the methodological structure.

The application of project-based teaching methodology is also one of the important directions. This approach allows students to apply theoretical knowledge to real problems. In the course "Application of Information Technologies in the Field," project work plays an important role in improving students' professional preparedness. For example, students perform tasks such as collecting, analyzing, and presenting information related to a specific field using digital tools. This process serves to develop the professional competencies defined in the target block of the methodological structure. Project-based learning develops students' independent working skills, teamwork abilities, and problem-solving competencies.

The effective use of digital tools is another important direction in improving methodology. Within the framework of the digital educational environment, modern technologies such as Google Workspace, LMS platforms, Canva, and data analysis tools are integrated into the educational



process. Through these tools, the educational process becomes more visual, interactive, and practice-oriented. Students acquire skills in working with data, processing it, and analyzing it. This represents the practical expression of the technological components defined in the organizational-methodological block of the methodological structure.

Activating student activity is considered one of the main principles of methodological improvement. In the educational process, the student is viewed not only as a recipient of knowledge but also as an active participant. Through interactive methods, problem situations, and project activities, students' participation in the learning process is strengthened. This develops their independent thinking, analytical abilities, and decision-making skills. Since all blocks of the methodological structure are designed with student activity at the center, this direction plays an important role in increasing methodological effectiveness.

Developing independent learning is another important direction of methodological improvement. The digital educational environment creates broad opportunities for students to acquire knowledge independently. Through online resources, electronic textbooks, video materials, and interactive assignments, students can independently improve their knowledge. The effective organization of independent learning contributes to the formation of competencies specified in the result-oriented block of the methodological structure. At the same time, independent learning develops students' self-management and planning skills.

All proposed methodological approaches are closely interconnected with the previously developed methodological structure. The competencies defined in the target block are implemented through the approaches identified in the organizational-methodological block. In the content-process block, the educational process is organized on the basis of these approaches. The result-oriented block makes it possible to evaluate and analyze the achieved



outcomes. Thus, the proposed directions for methodological improvement are implemented in close connection with all components of the methodological structure.

Improving methodology in the context of a digital educational environment not only increases the effectiveness of the educational process but also raises students' professional preparedness to a higher level. Through the effective use of modern information technologies, the application of interactive and project-based teaching methods, and the development of independent learning, professional competencies are formed among students. This makes it possible to improve the quality of the educational process in this subject and organize it according to modern requirements.

Improving the teaching methodology of the course "Application of Information Technologies in the Field" requires a comprehensive approach. In this process, interactive teaching, project-based learning, the use of digital tools, increasing student activity, and developing independent learning emerge as the main directions. When these directions are implemented in harmony with the methodological structure, the effectiveness of the educational process significantly increases, and the necessary professional competencies are formed among students.

The analysis of the curriculum-based description of the course "Application of Information Technologies in the Field" in the conditions of a digital educational environment is important for deeply understanding the content of the subject, identifying its methodological possibilities, and determining directions for improving the teaching process. This subject is one of the important professionally oriented disciplines in the modern higher education system and serves to develop students' skills in the effective use of information technologies.

Table 1. General Workload of the Course "Application of Information Technologies in the Field"



Indicators	Content
Course name	Application of Information Technologies in the Field
Course type	Compulsory subject
Course code	AMT101
Academic year	1st year
Semester	1st semester
Form of education	Full-time
Total workload	120 hours
Lectures	24 hours
Practical classes	24 hours
Independent learning	72 hours
Credits	4 credits
Assessment form	Examination (test)
Language of instruction	Uzbek

As can be seen from the table, the structure of the subject is formed according to the traditional requirements of higher education, where theoretical and practical classes are distributed in a balanced manner. However, the large portion of the workload allocated to independent learning requires the student to participate as an active subject within the framework of this discipline. This is especially important in the context of a digital educational environment because modern education is aimed at supporting students' independent learning activities.

The 24 hours allocated to lectures serve to form theoretical knowledge. At this stage, students are provided with knowledge about the main concepts of information technologies, their types, and areas of application. However, from the perspective of modern methodological approaches, lectures should not remain only a means of delivering information but should also be enriched with



interactive elements. Therefore, the use of visual materials, multimedia tools, and interactive platforms in lectures is necessary.

The 24 hours allocated to practical classes serve to strengthen theoretical knowledge and apply it in practice. Within these classes, students acquire skills in working on real tasks, processing and analyzing data, and presenting results. This is important in shaping their professional preparation. From this point of view, organizing practical classes on a project basis, creating problem situations, and widely using digital tools are methodologically effective.

The 72 hours allocated to independent learning constitute the most important part of the course structure. This indicator means that the course is aimed at developing students' independent activity. In the context of a digital educational environment, it is important to use LMS platforms, cloud technologies, and online resources to effectively organize independent learning. By assigning independent tasks to students, having them complete assignments on digital platforms, and analyzing the results, it is possible to increase the effectiveness of the educational process.

The allocation of 4 credits for the course indicates its importance within the curriculum. Education organized on the basis of the credit system allows accurate planning and assessment of students' workload. At the same time, although the use of test examinations as an assessment form serves to identify theoretical knowledge, it is necessary to diversify the assessment system based on modern methodological approaches. In other words, along with tests, it is advisable to enrich the assessment system through project work, practical assignments, and portfolios.

Based on the description of this subject, it can be emphasized that its structure creates the necessary opportunities for developing professional competencies among students. However, effective use of these opportunities requires improvement of the teaching methodology. In particular, it is necessary to widely introduce the digital educational environment, apply



interactive and project-based teaching methods, effectively organize independent learning, and improve the assessment system.

The curriculum-based structure of the course “Application of Information Technologies in the Field” has rich methodological opportunities, and by improving it on the basis of modern pedagogical approaches, it is possible to significantly increase the effectiveness of the educational process.

REFERENCES

1. Abduqodirov A.A., Pardaev A.X. *Theory and Practice of Distance Learning*. – Tashkent: Fan, 2009.
2. Begimqulov U.Sh. *Methods of Teaching Informatics and Information Technologies*. – Tashkent: TDPU Publishing House, 2020.
3. Sayidahmedov N. *Modern Pedagogical Technologies*. – Tashkent: Fan, 2019.
4. Azizkhojayeva N.N. *Pedagogical Technologies and Pedagogical Skills*. – Tashkent: O‘qituvchi, 2018.
5. Abduqodirov A.A., Toshtemirov D.E. *Methodology of Using Information and Communication Technologies in Educational Institutions*. – Gulistan: University, 2019.
6. Aripov M., Muhammadiyev M. *Informatics and Information Technologies*. – Tashkent, 2004.
7. Khudoyberdiyev A. *Methodology of Teaching Information Technologies in a Digital Educational Environment*. – Tashkent, 2023.
8. Khudoyberdiyev A. *Pedagogical Foundations of Using Interactive Methods in the Educational Process*. // Modern Education Journal, 2022.
9. Khudoyberdiyev A. *Methodology of Organizing Independent Learning Based on LMS Platforms*. // Pedagogical Skills, 2023.