

IMPROVING THE COMPETENCY-BASED APPROACH IN TECHNOLOGY EDUCATION LESSONS THROUGH DIGITAL PEDAGOGICAL TECHNOLOGIES

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Abstract

This article discusses the implementation of the competency-based approach in technology education lessons and its improvement through digital pedagogical technologies. In the modern educational process, it is important not to limit students to theoretical knowledge, but also to develop their competencies in practical activities, independent thinking, problem-solving, creativity, working with information, and effective use of digital tools. The article analyzes the specific characteristics of technology education, the content of the competency-based approach, the opportunities provided by digital pedagogical technologies, and methods of their application in the educational process. It also reveals the pedagogical potential of using interactive presentations, video lessons, electronic educational resources, online tests, virtual modeling, and digital assessment tools.

Keywords: technology education, competency-based approach, digital pedagogy, digital technologies, pedagogical technology, digital competence, practical competence, interactive learning, electronic educational resources, creativity.

INTRODUCTION

Today, the digital transformation taking place in the education system requires the renewal of the content and methods of teaching. In particular, the use of modern pedagogical and digital technologies in technology education lessons creates broad opportunities for connecting students' knowledge with practical activities, developing creative thinking, and forming professional competencies. One of the main tasks of technology education is to develop students' skills in processing various materials, understanding technological processes, designing, performing practical tasks, and evaluating the results. Therefore, when teaching these subjects, it is necessary not to limit the educational process to traditional explanations and practical exercises, but to use approaches that develop students as active participants in the learning process.

The competency-based approach is one of such modern approaches. Within this approach, the educational outcome is determined not only by how well a student memorizes a particular topic, but also by their ability to apply acquired knowledge in practical situations. Digital technologies make it possible to organize this process more effectively.

Studies published in 2026 also identify the development of pedagogical competencies through digital technologies, effective use of digital educational resources, and the introduction of innovative methods into the educational process as important areas.

The competency-based approach contributes to connecting the content of the educational process with practical activities. In traditional education, the level of students' knowledge is often determined through theoretical questions, whereas the competency-based approach also places considerable emphasis on their ability to apply knowledge in practice.

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The competency-based approach is particularly important for technology education. In these subjects, students are expected to:

- understand technological processes;
- use tools and equipment correctly;
- know the properties of materials;
- determine the technological sequence;
- independently develop projects;
- perform practical tasks;
- solve emerging problems;
- evaluate the results of their work.

Therefore, in technology education, it is appropriate to develop knowledge, skills, and abilities not separately, but as an integrated set of competencies.

The following competencies can be given particular attention in technology education:

1. Technological competence.

This is related to students' understanding of technological processes and their ability to use materials, tools, and equipment.

2. Practical competence.

It refers to the ability to apply theoretical knowledge when performing practical tasks.

3. Creative competence.

It enables students to develop new ideas, improve existing products or processes, and find unconventional solutions.

4. Information and digital competence.

It involves searching for and processing electronic information, using digital tools, and applying them in one's own activities.

5. Communicative competence.

It includes the ability to work in groups, present one's project, and justify one's ideas.

POSSIBILITIES OF DIGITAL PEDAGOGICAL TECHNOLOGIES

Digital pedagogical technologies help organize the educational process in a visual, interactive, and engaging manner. Within the framework of digital transformation in education, opportunities such as interactivity, individualization, openness, and increased learning effectiveness are particularly emphasized.

The use of digital pedagogical technologies in technology education lessons provides a number of advantages.

First, visualization is improved. For example, sewing, cooking, woodworking, or metalworking processes can be demonstrated through video lessons.

Second, students' independent learning is strengthened. Students can independently study electronic materials and complete assignments.

Third, opportunities for an individual approach are expanded. More challenging tasks can be given to students with higher levels of achievement, while simpler tasks can be provided to students who experience difficulties.

Fourth, the assessment process becomes faster. Students' knowledge can be quickly assessed through electronic tests, interactive tasks, and online assessment tools.

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Combining the competency-based approach with digital pedagogical technologies in technology education lessons can increase the effectiveness of the educational process.

The following results can be achieved:

- students' interest in lessons increases;
- independent learning skills are developed;
- understanding of technological processes becomes easier;
- creative thinking develops;
- digital literacy improves;
- problem-solving skills develop;
- abilities to work in groups and communicate are formed;
- opportunities to apply theoretical knowledge in practice are expanded.

At the same time, the use of digital technologies itself does not automatically ensure educational effectiveness. The most important aspect is selecting a digital tool that corresponds to the objectives of the lesson. In other words, technology should not be the goal, but rather a means of achieving the desired educational outcome.

CONCLUSION

In conclusion, the use of the competency-based approach in technology education lessons is one of the important requirements of modern education. This approach makes it possible to develop not only students' theoretical knowledge but also their practical, creative, communicative, and digital competencies. Digital pedagogical technologies create broad opportunities for the effective implementation of the competency-based approach.

The purposeful use of electronic educational resources, video lessons, interactive tasks, digital presentations, online tests, virtual modeling, and digital assessment tools contributes to improving the quality of technology education.

Furthermore, it is advisable to integrate project-based learning, problem-based learning, practical tasks, and interactive methods with digital tools in technology education. As a result of such an approach, students do not simply acquire ready-made knowledge; they learn to conduct independent research, generate new ideas, solve practical problems, and evaluate their own activities.

Thus, the combination of **competency-based approach + digital pedagogical technologies + practical activity** can be considered one of the effective directions for improving technology education.

REFERENCES

1. Azizxo‘jayeva N.N. Pedagogik texnologiyalar va pedagogik mahorat. – Toshkent: Fan va texnologiya, 2016.
2. Muslimov N.A., Usmonboeva M.H., Sayfurov D.M., To‘raev A.B. Innovatsion ta’lim texnologiyalari. – Toshkent: Sano-standart, 2015.
3. Mishra P., Koehler M.J. Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge. Teachers College Record, 2006.
4. UNESCO. ICT Competency Framework for Teachers. – Paris: UNESCO, 2018.

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