

USING INTERACTIVE TECHNOLOGIES IN DEVELOPING PROFESSIONAL COMPETENCE OF HIGHER EDUCATION STUDENTS

Asrarova M.U.

Doctor of Philosophy, Associate Professor,
Bukhara State Technical University, Uzbekistan.

E-mail: asrarova_muxabbat@bstu.uz

ORCID: <https://orcid.org/0009-0001-8045-3055>

<https://doi.org/10.5281/zenodo.20450045>

Abstract. The article examines the problem of developing professional competencies of higher education students in the context of modern labor market requirements. The relevance of the study is обусловлена by the need to improve students' professional training through the implementation of interactive learning technologies that enable the simulation of real industrial situations. The study employed methods of scientific and pedagogical literature analysis, generalization of pedagogical experience, and observation. The pedagogical conditions for using digital platforms to model interdisciplinary connections and develop students' practice-oriented skills are substantiated.

Keywords: professional competencies, higher education, interactive learning technologies, business games, digital educational platforms, practice-oriented learning, pedagogical conditions, labor market.

Introduction. Current economic development trends, the digitalization of production processes, and increasing competition in the labor market place new demands on the quality of training for university graduates. Currently, there is a demand for specialists possessing not only fundamental knowledge but also well-developed professional competencies that enable them to effectively solve professional problems, adapt to changing work conditions, and master modern technologies [1]. However, higher education practices remain conflicted between the needs of society and employers for specialists prepared for practical professional work and the prevalence of traditional forms of educational organization focused primarily on the transfer of theoretical knowledge. This conflict highlights the need to identify and implement pedagogical technologies that enhance students' cognitive activity and simulate the conditions for future professional work.

Literature review. The development of professional competencies, a competency-based approach to education, and the use of active learning methods have been addressed in the works of many domestic and international researchers. However, an analysis of the scientific literature reveals that the use of digital educational technologies, virtual simulators, and business games as tools for simulating interdisciplinary connections and developing professional competencies in students majoring in technical fields remains underdeveloped and requires further theoretical understanding and practical substantiation [3, 4].

An analysis of current educational practices reveals a discrepancy between labor market demands for the level of professional training of technical university graduates and the development of their professional competencies. A significant portion of young professionals experience difficulties adapting to the conditions of professional activity, which is due to insufficient experience in applying acquired knowledge to solving complex production problems. This situation is due to a number of objective factors. First of all, the pace of technological development and digital transformation of production significantly outpaces the process of updating the content of educational programs [5]. Moreover, employers increasingly require graduates to have practical experience and be prepared to independently perform professional functions already at the initial stage of their working life. At the same time, modern production processes require proficiency in digital technologies, project and research skills, critical thinking,



the ability to continuously develop professionally, and adapt to changing conditions of the professional environment. The development of these qualities within the framework of the traditional organization of the educational process remains a pressing task for higher education [6].

The practical significance of this issue is determined by its direct impact on the quality of training of future specialists and their competitiveness in the labor market. The level of development of professional competencies largely determines the success of graduates' professional adaptation, their demand by employers, opportunities for career advancement, and the effectiveness of their professional activities [7]. Insufficient readiness of young specialists to solve practical problems can lead to increased adaptation periods in the workplace, reduced labor productivity, and additional costs for organizations on professional training and retraining. In turn, a high level of development of professional competencies contributes to increased efficiency of production activities, the development of innovative potential of enterprises, and the sustainable socioeconomic development of society.

Research Methodology. The problem of developing students' professional competencies and improving professional training methods is the subject of numerous studies in Russian and foreign pedagogical science. The methodological foundations of the competency-based approach are presented in the works of I. A. Zimnyaya, A. V. Khutorskoy, V. A. Bolotov, I. D. Frumin, O. E. Lebedev and other researchers, who consider competence as an integrative characteristic of a specialist's personality, reflecting the readiness and ability to effectively carry out professional activities in changing conditions. Within the framework of this approach, special attention is paid not only to the assimilation of a system of knowledge, skills and abilities, but also to the development of the ability to apply them to solve professional problems [8].

In her study of the competency-based approach to education, I. A. Zimnyaya emphasizes that its implementation requires the educational process to focus not only on the acquisition of a system of knowledge, skills, and abilities, but also on developing students' ability to effectively apply them in professional activities and various life situations. According to A. V. Khutorskoy, competencies represent an integrative development, encompassing a combination of knowledge, practical skills, work experience, and personal qualities that ensure the successful performance of professional functions and the solution of professional problems [9].

An analysis of scientific and pedagogical literature indicates that developing professional competencies and improving educational technologies occupy a leading place in contemporary pedagogical research. Interactive learning technologies are viewed as an effective tool for activating students' cognitive activity, developing their professional thinking, and improving the quality of professional training in a competency-based education setting [10].

Significant attention is also paid to the modernization of vocational education in the research of scholars from the Republic of Uzbekistan. The theoretical and practical aspects of the implementation of innovative pedagogical technologies, a competency-based approach, and the digitalization of the educational process are reflected in the works of N. N. Azizkhodzhaeva, R. Kh. Dzhuraev, B. Kh. Khodzhaev, U. N. Nishonaliev, and other researchers. These authors emphasize that improving the higher education system in the Republic of Uzbekistan is directly linked to the introduction of modern educational technologies, the development of digital pedagogy, and the development of professional competencies that ensure graduates' competitiveness in the modern labor market.

The above mentioned provisions are confirmed by the research of Salakhiddin Muradov, Zohidjon Abdurakhmanov, Dildora Mamaraimova, as well as the work of the author M.U. Asrarov, which pays special attention to the pedagogical potential of interactive learning technologies in the process of professional training of students [11]. The researchers note that the use of role-playing and business games, case technologies, digital simulators, multimedia tools and online platforms creates favorable conditions for activating the cognitive activity of students,



developing communicative competence, professional thinking and sustainable educational motivation [12]. According to the authors, the use of interactive teaching methods contributes to bringing the educational process closer to the real conditions of professional activity, ensures the formation of practice-oriented competencies and increases the level of readiness of future specialists to solve professional problems.

Conclusion. Thus, an analysis of the works of domestic and international researchers allows us to conclude that interactive and digital educational technologies are a significant factor in improving the quality of professional training for university students. Scientific literature emphasizes their role in developing professional thinking, communication and organizational skills, independence, decision-making ability, and students' readiness for effective professional performance in the context of the digital transformation of society and the economy.

References

1. Irina Alekseevna Zimnyaya. Key competencies — a new paradigm of educational outcomes // Higher education today. – 2003. – No. 5. – P. 34–42.
2. Andrey Viktorovich Khutorskoy. Key competencies as a component of personally oriented education // Public education. – 2003. – No. 2. – P. 58–64.
3. Bolotov Viktor Aleksandrovich, Frumin Isaak Davidovich. Competence-based model: from idea to educational program // Pedagogy. - 2003. - No. 10. - P. 8-14.
4. Lebedev Oleg Evgenievich. Competence-based approach in education // School technologies. - 2004. - No. 5. - P. 3-12.
5. Selevko Gennady Konstantinovich. Modern educational technologies. – M.: Public education, 2006. – 816 p.
6. Polat Evgeniya Semenovna. Modern pedagogical and information technologies in the education system. – M.: Academy, 2010. – 368 p.
7. Azizkhodzhaeva Nigina Nurillaevna . Pedagogical technologies and pedagogical skills. – Tashkent: Moliya , 2006.
8. Dzhuraev Rahim Khalilovich . Theoretical foundations for improving vocational education. – Tashkent, 2014.
9. Khodjaev Bakhtiyor Khamidovich . General pedagogy. – Tashkent: Tafakkur Boston , 2017.
10. Nishonaliev Uktam Nishonalievich . Innovative technologies in the system of higher education. – Tashkent, 2018.
11. Mamaraimova Dildora . Modern interactive technologies in professional training of students // Scientific and methodological journal. - 2022. - No. 4. - P. 45-52.
12. Muradov Salakhiddin . Digital educational technologies in the higher education system of Uzbekistan // Young scientist. - 2023. - No. 12. - P. 118-123.

