The Concept of Technological Competence and its Significance

Mahmudov Yusup Ganievich¹, Toshpulatov Akmal Kholmirzaevich²

¹Professor of Termez State University
²Doctoral student of Termez State University

Abstract

Traditional knowledge and skills are not enough for success in modern society and for meeting human needs. This process requires not only professional knowledge, skills and competencies, but also a complex set of qualities that include practical experience, social behavior, self-discipline skills and training.

Key words: competence; competence; technological competence; change the activity.

Introduction

Technological competence is defined as “a set of motivational, organizational, and managerial skills aimed at carrying out a modified activity based on a specific algorithm”. This means “having sufficient technological literacy, skills to solve problems of daily life independently, successful and painless adaptation to changes in the social environment” [1, p. 64].

Research on these technological competencies has been conducted. In this case, it is expedient to determine the essence of the concepts of technological competence and competence.

Competence is knowledge in this or that field [2, p.196], "Competence" (lat. Competo - I achieve, deserve, deserve) - 1) the scope of powers, rights and duties of a particular state body (local self-government body) or official, established by law, charter or other document; 2) knowledge, experience in this or that field [3, p. 704]. 16 different meanings of the word competence were used by psychologists on 7 different assessment scales (internet association psychologists expert). The concepts mentioned by the experts are:

- ability to solve production problems;
- ability to apply knowledge and skills in specific situations; - compliance with the description of the professional standard;
- Requirements to the employee by the organization for the purpose of formation of qualitative activity of the subject;
- compliance of the employee's standards of conduct with the organization;
- a general set of knowledge, skills and abilities (BKM), abilities, motives, personality, communicative qualities and other concepts; - readiness and skills for quality work;
- Responsibilities and powers of office; - BKM + professionally important qualities;
- various aspects of competence;
- professionally important qualities in conjunction with the organizational context; - deep understanding of professional experience;
- personality, individuality;
- the human factor in successful activity;
- Criteria for effective production activities; - creativity;
- production tasks in specific organizations.

As a result, competence is a general combination of knowledge, skills, abilities, causal factors,
personal qualities, target situations, which provides effective solutions for executors of a specific organization, a specific group, a specific workplace, a specific production team [4, p.87].

Main part: The concept of competence is a competence acquired by a student (for example, a future teacher) in a particular field, that is, a fully formed set of certain qualities [5, p.55]. The concept of competence (from the Latin competenlia, compete - means "to achieve together, to win, to fit, to fit") in dictionaries means "to have knowledge that allows you to think about something", "to be aware, to be entitled". Indicates Virtually all dictionary developers limit the categories of "competence" and "competence". The definition of competence is similar and complementary, but there is no single definition for the word competence, which is a set of powers (rights and obligations) of a body or official, defined by law, regulations of this body or other circumstances. "Having knowledge (possessing) that allows one to think about something", "a set of questions (areas) that someone is well aware of" [6, p.209].

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1. Social competence - the ability to be active in social relations, the acquisition of skills, the ability to communicate with the subjects in professional activities.

2. Special competence - preparation for the organization of professional and pedagogical activity, rational solution of professional and pedagogical tasks, realistic assessment of the results of activities, consistent development of BCM, on the basis of this competence is psychological, methodological, informational, creative, innovative and communicative competence.

3. Personal competence - to consistently achieve professional growth, improve skills, demonstrate their inner potential in professional activities.

4. Communicative competence - the ability to communicate sincerely with all participants in the educational process, including students, to listen to them, to have a positive impact on them.

5. Extreme competence - the ability to make rational decisions, to act correctly in emergencies (natural disasters, technological process failure), in the event of pedagogical conflicts [7, 123].

Technological competence is the mastery of advanced technologies that enrich the professional and pedagogical BCM, the use of modern tools, techniques and technologies.

If we look at world research, we will see that technological competence is the foundation of human existence. According to Dyrenfurth and Layton, at each stage of the life cycle, “People are constantly striving to acquire new things or to improve what they already have, to improve their quality of life.” [8] In their work, they emphasize three types of technological competence:

1. Technological knowledge.

2. Technological skills.

3. Active and proactive communication with technological desire or technology. [8, p.97]

In other words, technological competence implies a balance between knowledge, skill, and
motivation.

A.A.Verbitskiy, V.E. Steinberg, E.I. Nikiforova, N.N. In the works of Manko et al. [9, p.84], technological competence is also seen as part of professional competence. Therefore, technological competence also varies depending on the type of professional activity.

When talking about technological competence, it is necessary to determine its structure and content, the conditions and stages of formation in man, as well as the factors influencing this process.

Xamatgaleeva G.A., Skachkova N.V., Gorbunov V.N., Shumilkin N.N. [10, p.65] and others point to technological competence as the core competencies in technology lessons formed in the school education process. At the same time, teaching focuses on developing students ’knowledge and creative skills, which is facilitated by the project method. In this case, the competence “does not allow a person to comprehend, master and implement the instruction, the description of the technology, the algorithm of activity and its settings to disrupt the technological activity” [11, p.100].

O. Autio [12, p.5] conducted an experiment and showed that technological competence develops over a lifetime and goes through three crucial stages: in the “Technology” class in elementary school, by participating in technical projects in high school, and then in conducting various research.

The period of study in high school is the most important period for the development of technological competence.

As it turns out, interest has a big impact on it, interest in engineering and technology, the need to study relevant sciences; toys at home (Lego, toys played with the remote control); availability of equipped workshops; interest in technology should be supported by parents, teachers, etc., etc. This experience has shown that if special conditions are created in the school for the development of technological competence, then it will be possible not only to identify school students who will choose a particular specialty in the future, but also to pre-determine such a choice [13].

By the end of the twentieth century, a new technological society began to take shape, where technological knowledge and skills began to take a special place. This has led to the emergence of a new field of education in the curricula of schools in most developed countries of the world - "Technology". Technologies that replace traditional labor education have become a necessity for future builders and tailors alike, as well as for future bankers, doctors, actors, and other professionals [14, p.26].

Conclusion: There are different approaches to defining the concept of “technology”. Yu.L. According to Khotuntsev, change activity is the basis of science: “Science technology is an objective, systematically organized knowledge that changes human activities on the goals, methods, stages, tools, limitations, evolution and results, trends in its improvement, analysis, implementation and optimization.”[14, p.26]. This description of science is explained by its origin: teche - skill, art, logos - knowledge, science (Greek) [15]. S.N. Babina argues that the concept of “technology” has many structures and includes motivational, purposeful, meaningful, procedural, effective, and educational aspects in a person’s changing activities ”[16, p.320].

The subject of "Technology" is also considered to be "the science of the art of creating goodness." In such views, it performs the following functions:

- material application of knowledge;
- creation of privileges for the formation of good deeds in the existence of human society;
- creation of prosperity and material wealth;
- Ensuring the self-governance and independence of society [17].
As a field of education, “Technology” in general education schools pays maximum attention to career-oriented education as it introduces students to different areas of social production and contributes accordingly. This field maximizes and expands the integration inherent in the concept of modern school modernization [18, p. 2].

REFERENCES