

CLASSIFICATION OF “SET OF COMPETENCIES” IN THE CONTENT OF VOCATIONAL EDUCATION

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Annotation

This article explores the classification of competencies within the content of vocational education, emphasizing the importance of aligning educational outcomes with labor market demands. It outlines key distinctions between competency-based and traditional education, highlighting the role of knowledge, skills, and abilities in competency formation. Drawing on international practices and regulations, such as Uzbekistan's national framework for professional skills development, the article categorizes competencies into four types: general cultural, personal, general occupational, and occupation-specific. These classifications aim to create adaptable professionals capable of meeting modern workplace demands while contributing to societal and cultural development.

Keywords. Competency-based education, vocational education, knowledge, skills, abilities, professional standards, competency classification, labor market demands, general cultural competencies, personal competencies, general occupational competencies, occupation-specific competencies.

Introduction

Considering the convergence of educational content, which reflects learning outcomes, with the consciousness of students, it is crucial to develop manipulable knowledge and skills, as well as competencies related to their practical demonstration.

In international practice, there are various approaches to classifying competencies and their types, with a foundation in knowledge, skills, and abilities.

In accordance with the Decree of the President of the Republic of Uzbekistan No 5812, dated September 6, 2019, “On additional measures to further improve the vocational education system”, defined the priority directions for preparing qualified personnel in the vocational education system¹. The tasks outlined in the decree emphasize the need to thoroughly study the qualification requirements set by foreign and local labor markets and employers for specialists. It underscores the importance of determining in advance what competencies are necessary for the specialists being trained and organizing the educational process accordingly.

Within the framework of these tasks, the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 287, dated May 15, 2020, "On Measures to Organize the Activities of the National System for Developing Professional Skills, Knowledge, and Competencies,"² was adopted. This resolution approved the regulation on the National System for Developing Professional Skills, Knowledge, and Competencies.

¹ <https://lex.uz/docs/6970603>

² <https://lex.uz/ru/docs/7265573>

The National Qualifications Framework plays a significant role in aligning the outcomes of vocational training with the knowledge, skills, abilities, and competencies acquired during the learning process. It aims to establish a robust system of interconnection between vocational training and labor market demands for skills, assess the compliance of vocational training and work experience outcomes with qualification requirements and professional standards, and facilitate the recognition of qualifications at both national and international levels.

The rapid evolution of global labor markets and the increasing complexity of professional roles necessitate a shift in how vocational education prepares individuals for the workforce. Competency-based education has emerged as a critical approach, focusing on equipping learners with the knowledge, skills, and abilities required for specific professional tasks. Unlike traditional education, which often emphasizes theoretical knowledge, competency-based education prioritizes the practical application of learning outcomes in real-world settings. Additionally, it provides a detailed analysis of four key competency types and their role in creating skilled, adaptable professionals.

The difference between competency-based education and traditional education is crucial for understanding the principles of developing individual abilities. Competency-based education often requires specialists to demonstrate their ability to perform specific tasks effectively.

Key factors for success in educational processes

Success in educational processes relies on the following factors:

- Alignment with the strategic goals and plans of production enterprises;
- A foundation on a highly efficient system;
- Developing a competency model, identifying individual competency gaps, and addressing these gaps through targeted training programs.

Neglecting any of these factors can significantly hinder success or even lead to failure. To evaluate individual qualifications, production enterprises require candidates to demonstrate the ability to fulfill tasks and responsibilities in accordance with standard job requirements.

Key concepts in competency formation

Competency formation is a multifaceted process that integrates knowledge, skills, and abilities to prepare individuals for effective performance in various fields. The development of competencies is crucial in education and professional settings, as it ensures individuals can adapt to changing environments and meet the demands of the labor market. Competency-based education emphasizes the practical application of knowledge and the development of skills and abilities that are directly relevant to specific tasks or professions. This approach has evolved over time, influenced by various educational theories and practices. Below are the key concepts in competency formation, as discussed in the provided papers.

Before discussing the concepts of competency and competence, it is important to consider that competencies are built upon knowledge, skills, and abilities. Below are the key didactic concepts:

1. Knowledge

Knowledge is the foundation of competency formation, encompassing information, concepts, and theoretical insights about various phenomena. It is the practical result of understanding reality, validated through experience [1]. In the context of engineering education, knowledge is crucial for understanding global and domestic market trends and addressing key problems in the formation of competencies demanded by the labor market [2]. The competency-based approach in education emphasizes the integration of knowledge with skills and abilities to achieve specific learning outcomes [3].



Knowledge is the practical result of understanding reality, validated through experience. It includes information, concepts, and theoretical insights about natural and societal phenomena, achievements in science and technology, and other areas. In a broad sense, knowledge is an accumulation of ideas, theories, and information about a subject, enabling individuals to achieve specific goals.

2. Skills

Skills are the structural components of activities that enable the practical application of knowledge. They can be categorized as practical (physical) or intellectual and vary in complexity [1]. The development of key skills is essential for the comprehensive assessment of competencies, ensuring successful adaptation to changes and the ability to apply acquired competencies in various activities [1].

In professional education, skills are developed through interdisciplinary connections and professionally-oriented learning processes, which are crucial for forming professional competence [4]. Skills refer to a learner's ability to perform specific practical actions based on acquired knowledge and experience. They are the structural components of activities that enable the practical application of knowledge. Skills are categorized as practical (physical) or intellectual and can be simple or complex. Practical skills are directed toward performing labor activities, while intellectual skills aim to acquire and internalize knowledge.

3. Abilities

Abilities refer to the mastery achieved through experience, including automated proficiency in specific activities or professions. They are influenced by factors such as complexity, age, personal traits, and prior knowledge [1]. Abilities are also associated with learning competence, which is effective in gaining new competencies and transforming existing ones [5].

Abilities (derived from Arabic, meaning aptitude or talent) refer to mastery achieved through experience, including automated proficiency in a specific activity or profession. Psychologically, it is the ability to perform tasks efficiently and effortlessly. Skill development depends on factors such as complexity, age, personal traits, and prior knowledge. Skills can facilitate or, in some cases, hinder the acquisition of other skills due to transfer or interference.

Competency and Competence

The competency-based approach in education has evolved to focus on learning outcomes and the practical application of knowledge, skills, and human dispositions [3].

The distinction between competence and competency is crucial for understanding their roles in education and professional development, as they determine the qualitative level of knowledge and skills implementation [6].

Competency: This term originates from the word "compete," meaning "achieve" or "qualify." It refers to the authorized scope of knowledge, rights, and responsibilities defined by laws or regulations. Competency encompasses knowledge and experience within a specific field.

Competence is a predetermined set of knowledge, skills, and abilities, while competency is a qualitative characteristic of the acquisition of this knowledge and skills, manifested in practical activity [6].

Competence: Competence is the ability to make correct judgments based on sufficient knowledge, logical reasoning, and proficiency in a particular area. It reflects a person's capability to apply their expertise in practice, demonstrating mastery and professional aptitude. Competency-based education emphasizes preparing individuals who can meet the demands of their profession and adapt to changing requirements. By fostering a balance of knowledge,

skills, and abilities, competency-based education ensures learners are equipped with the essential tools for success in the modern workforce.

Competencies as a subject of research and their classification

The study of competencies has evolved significantly, with various classifications and perspectives emerging over time. Competencies are broadly defined as a combination of skills, knowledge, and attitudes that enable individuals to perform tasks effectively. J. Raven's classification of competencies highlights a diverse range of abilities, from emotional control and self-regulation to collaborative skills and conflict resolution. This multifaceted view aligns with contemporary research, which emphasizes the importance of competencies in both educational and professional settings. The following sections explore the classification and significance of competencies, drawing insights from recent academic research.

Adaptive, Extreme, and Situational Competencies: These competencies are grouped based on their manifestation in response to work activities. They are crucial for employees to adapt to changing environments and handle extreme situations effectively [7].

Learning, Experiential, Research, and Innovative Competencies: These are categorized by the depth of development, from basic learning to the generation of innovations. They emphasize the importance of continuous learning and innovation in professional growth [7].

Cognitive and Conceptual Competencies: Research has shown that programs aimed at strengthening cognitive and conceptual competencies significantly improve students' abilities, as evidenced by a study conducted in Quito, Ecuador [8].

These competencies are primarily focused on achieving tangible results and efficiency in real workplace settings.

Contextual differences in competencies

It is essential to note that there is no universally accepted list of core competencies globally. Competencies vary across countries based on their unique labor market characteristics. This variation is natural, as competencies represent the social demands placed by individual societies on their citizens.

Defining competence and competency

Based on the above analysis, the following definitions are proposed:

- **Competence:** "The primary criterion determining a specialist's success in professional activities".
- **Competency:** "An indicator of deriving dividends through the manipulation of knowledge to create new value".

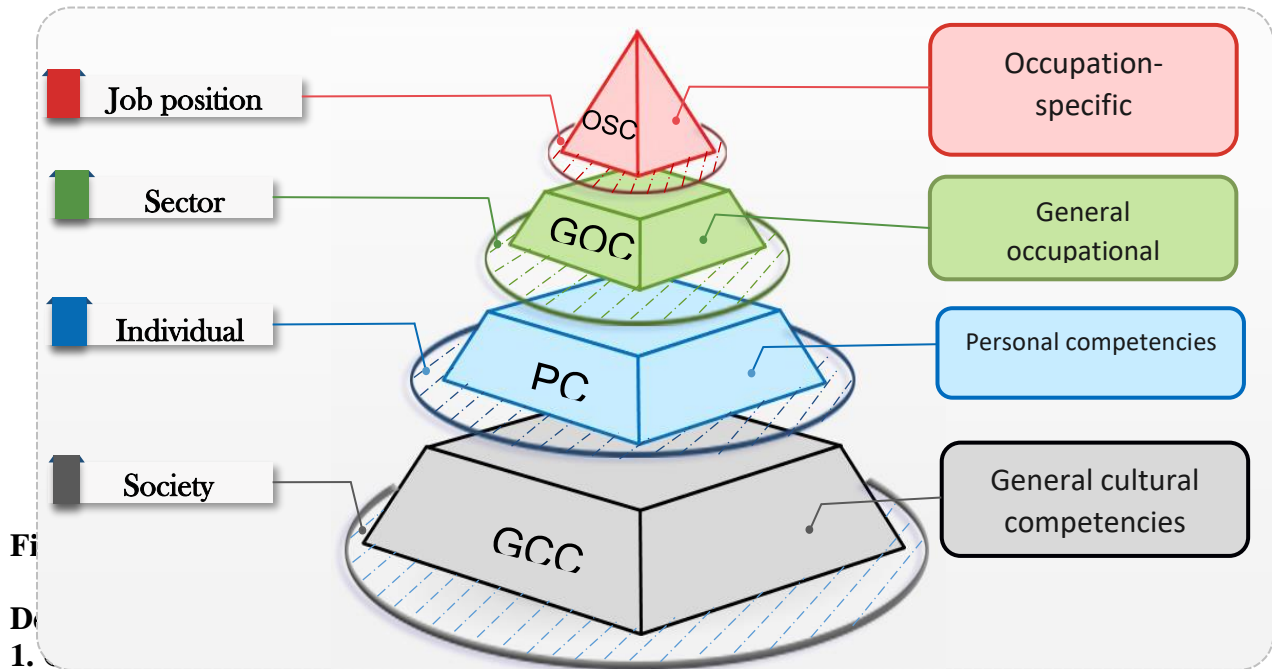
Knowledge manipulation refers to the process where, in an artificially created educational environment, learners apply their acquired knowledge, skills, and abilities in practice, revealing hidden potential and capabilities.

Competency categories in vocational education

The term "**set of competencies**" refers to a collection of skills and attributes essential for ensuring competitiveness in the labor market, social adaptation, and stability as learning outcomes. Based on international experience, the competencies in vocational education are recommended to be classified into four categories:

1. **Cultural Competencies:** Broader cultural awareness and adaptability.
2. **Personal Competencies:** Individual traits and abilities.
3. **General occupational competencies:** Skills applicable across various professions.
4. **Occupation-specific competencies:** Expertise tailored to a specific profession.

This classification reflects the interplay between educational outcomes and labor market requirements, emphasizing the importance of competencies in creating successful and adaptable professionals (Fig. 1.).



1. universal, human, national, and ethical values as well as those linked to globalization. It includes:

- Respect for different races, religions, genders, customs, traditions, histories, and cultures.
- Commitment to equality, interethnic harmony, and patriotism.
- Devotion to one’s homeland and people, and adherence to ecological norms.
- Preservation of cultural and material heritage, such as folk arts, music, and architecture.
- Observance of universal ethical and ecological values, as well as national and familial traditions.

2. Personal Competencies (PC). Personal competency is based on social, personal, civic, and familial qualities. It refers to a person’s ability to:

- Manage themselves and adapt to various situations.
- Maximize the efficiency of their professional and personal activities in changing external environments.
- Fulfill assigned responsibilities with adaptability and resilience.
- Exhibit qualities such as self-discipline, responsibility, creativity, and adherence to civic values.
- Demonstrate self-control, self-evaluation, and a sense of civic duty.

3. General occupational competencies (GOC). General occupational competency is shaped by the foundational knowledge, skills, and abilities required for professional activities in a specific field. This includes:

- Working with professional documents and applying information and communication technologies.
- Planning objectives and independently identifying alternative solutions.
- Working effectively in teams or managing independent business activities.



➤ Proficiency in Uzbek for written and verbal communication, as well as fluency in foreign languages for oral and written interactions.

4. Occupation-specific competencies (OSC). Occupation-specific competency refers to a person's readiness and potential to actively engage in production activities. It includes:

➤ The professional knowledge, skills, and practical experience necessary to effectively solve tasks related to production.

➤ Competency is determined by the goals and tasks of the profession or position.

➤ Development of practical skills and business qualities specific to the individual's profession or role.

These competencies collectively aim to ensure that individuals are holistically prepared to meet the demands of modern workplaces while also contributing to societal, cultural, and environmental development.

Conclusion

The classification of competencies in vocational education plays a pivotal role in bridging the gap between educational outcomes and labor market demands. By integrating knowledge, skills, and abilities into a cohesive framework, competency-based education ensures that learners are equipped to meet the challenges of modern professional environments.

The categorization of competencies into general cultural, personal, general occupational, and occupation-specific types reflects a holistic approach to professional development. This framework not only prepares individuals for specific tasks but also fosters adaptability, critical thinking, and a sense of responsibility, enabling them to contribute effectively to societal and cultural progress.

As demonstrated by Uzbekistan's national initiatives and international best practices, the development of a robust competency framework is essential for creating skilled professionals who can thrive in dynamic and competitive labor markets. The emphasis on practical application and the alignment of competencies with professional standards are crucial steps toward achieving excellence in vocational education.

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