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DETERMINING STUDENTS' MOTIVATION IN DUAL AND TRADITIONAL EDUCATION USING THE "MOTYPE" METHODOLOGY

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Abstract: The article presents the main goals and significance of applying the dual education system in training engineers at higher education institutions. It also discusses psychological research findings on identifying the most prominent types of student motivation in dual and traditional education settings using the "Motype" methodology.

Keywords: dual and traditional education, "Motype" methodology, types of motivation, student respondents, psychological research findings.

Introduction

On June 20, 2024, the President of the Republic of Uzbekistan held a videoconference dedicated to the topic of "Priority tasks for improving the training of specialists in engineering fields and enhancing the performance of higher education institutions." During this meeting, the President emphasized the critical importance of innovation and the training of engineers in the country, outlining several key measures to be implemented. Among them: the establishment of university departments at partner enterprises and the widespread introduction of dual education.

In order to further develop the application of dual education in Uzbekistan, the Cabinet of Ministers of the Republic of Uzbekistan adopted Resolution No. 163 on March 29, 2021, entitled *"On measures to organize dual education in the system of vocational education."* This resolution approved the Regulations on the procedure for organizing dual education in vocational training. Later, the Cabinet of Ministers also approved the Regulations *"On the procedure for organizing dual education in higher education institutions"* under Resolution No. 14 dated January 16, 2025.

According to this decision, beginning from the 2025/2026 academic year, higher education institutions will gradually implement dual education, including the introduction of the *"Kasb egasi"* (Professional) dual education system. At present, efforts are underway to study foreign experience, refine national legislation, and introduce necessary amendments to further strengthen the legal framework regulating the dual education system in Uzbekistan.

In addition, priority measures have been identified to train highly qualified engineering specialists in the field of renewable energy sources. These include the development of a national

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plan and special programs, as well as the creation of a new system for training engineers through dual education at both higher and secondary specialized educational institutions [1,15].

However, several issues remain insufficiently studied. In particular, the level of participation of future engineers and employers in the dual education process, as well as the mechanisms of self-assessment in shaping and developing competencies under this system, have not been fully explored. Ongoing scientific research continues to investigate the differences between dual and traditional education, their respective advantages, and the extent to which each type of education enhances the competitiveness of engineering graduates in the labor market.

At the same time, the problem of identifying students' motivation in dual and traditional education settings remains highly relevant. In particular, clarifying the dominant types of motivation through the use of the *"Motype"* methodology and determining which types of motivation are most significant for students engaged in dual education have not yet been sufficiently addressed in psychological studies.

Literature Review

The dual education system has been widely implemented in more than 60 countries, including Germany, China, the United States, South Korea, Denmark, France, North Macedonia, Montenegro, Switzerland, the Netherlands, Austria, Serbia, and Slovenia, as well as in several Asian countries. It is considered one of the modern educational technologies and serves as a fundamental model of instruction that integrates theoretical learning with practical training in production enterprises. This integration provides a foundation for preparing highly qualified specialists with advanced professional skills in various industrial sectors [5].

The term *"dual"* originates from the Latin word *dualis* (meaning "twofold"), and is associated with the philosophical doctrine of *dualism*—the coexistence of seemingly irreconcilable states, principles, or modes of thought. The German philosopher Christian Wolff (1679–1754) first introduced the term. In its broader sense, dualism expresses paired concepts such as the world of ideas and the real world. Dualism has manifested in philosophical, religious, anthropological, and ethical forms [2].

According to L.V. Sidakova, the dual education system represents *"a type of education that combines the academic activities of an educational institution with the professional activities of production enterprises"* [3]. Similarly, researchers describe dual education as a clearly coordinated system between higher professional education institutions and employers, designed to prepare specialists with the precise qualifications required by industry [4].

An analysis of scientific and pedagogical literature demonstrates that significant progress has been made in clarifying key concepts such as "dual education," "dual education program," and "dual training." At the same time, various challenges remain regarding the practical organization of dual education [10–15].

Research Methodology

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The main objective of implementing dual education is to ensure the comprehensive development of Uzbekistan by harmonizing education with labor activity, thereby preparing highly qualified specialists for both large and small business enterprises. This system also plays an important role in increasing youth and women's employment and reducing poverty. Ultimately, dual education seeks to prepare technologically advanced, skilled industrial specialists.

Another goal of introducing the dual system is to train competent middle-level professionals across all sectors of the economy, equipping them with modern practical skills and encouraging young people to pursue vocational and professional careers. Dual education enables students to simultaneously acquire academic knowledge and develop professional competencies in real workplaces.

In recent years, Uzbekistan has undertaken major reforms in higher education, gradually narrowing the gap between academic preparation and the functional requirements of future professions. This has been achieved through the introduction of state educational standards and professional standards adapted to the labor market. Such reforms are effectively realized through the implementation of dual education models [5–15].

For the present study, the research process involved the following methods: analysis of scientific and pedagogical literature on dual education, comparative evaluation of higher education curricula, sociological surveys on dual education in engineering training, as well as methods of comparison and critical analysis.

Research Results and Discussion

It is well known that under dual education, preparing students for practical activities requires the development of skills in working with real-world objects, as well as creating opportunities to acquire professional experience in activities and elements relevant to their future careers.

The introduction of dual education in any institution involves a complex transition from traditional teaching methods to an additional, practice-oriented learning system. This transition requires society's readiness to adopt new norms shaped by modern demands for self-awareness, development, and continuous self-improvement. In dual education, all stakeholders production enterprises, students, higher education institutions, and the state benefit from participation:

For enterprises: it provides an opportunity to train future specialists, reduce the cost of recruitment, retraining, and adaptation of workers.

For higher education institutions: it ensures the training of highly qualified and competitive graduates.For students: it facilitates adaptation to real production conditions and increases the likelihood of successful employment in their specialty after graduation.For the state: it enables the efficient preparation of skilled personnel for the national economy, which brings significant socio-economic benefits. Given the rapid development of modern technologies and the economy, preparing qualified engineering specialists through dual education has become one of the most pressing issues of our time. In this context, identifying the motivation of students in dual and

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traditional education, determining the most prominent motivational types, and exploring which forms of motivation are most significant for students in dual education through the “Motype” methodology represent highly relevant areas of psychological research.

Research Framework

Purpose: To identify student motivation in dual and traditional education using the “Motype” methodology, determine the most dominant motivational types, and assess which motivational factors are crucial for students studying under the dual education system. Research Object: 88 senior students (3rd and 4th year) of a higher education institution. Target Group: 44 students studying under the dual education system (respondents). Control Group: 44 students studying under the traditional education system (respondents). Thematic Areas of the Study General assessment and prospects of dual education. Development of students’ professional competencies. Identification of differences between dual and traditional systems of education. Analysis of problematic aspects of higher education. Determination of motivation types in dual and traditional learning through the “Motype” methodology. It is recognized that the differences between traditional and dual education systems manifest not only in motivational structures but also in students’ levels of subjective control, value orientations, and personal qualities formed during the educational process. To explore student motivation in both systems, a psychological survey was conducted using the “Motype” methodology. The study focused on identifying various types of motivation, including instrumental motivation, professional motivation, entrepreneurial motivation, and lumpenized motivation (Figure 1).

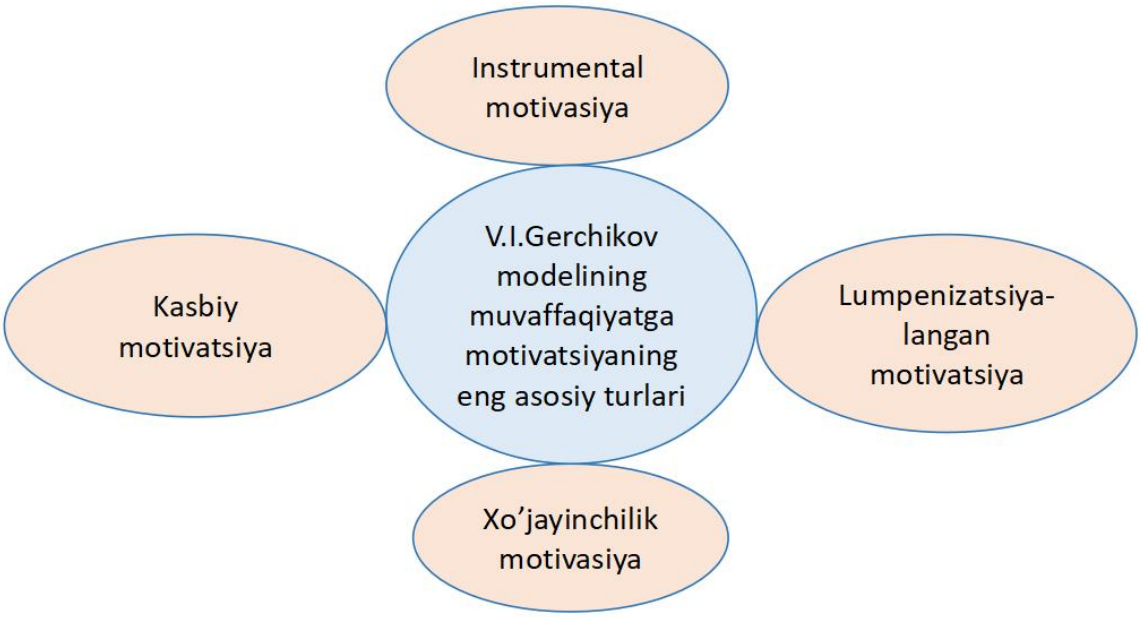

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Figure 1. Main Types of Achievement Motivation in V.I. Gerchikov's Model

It is well known that the *Motype* methodology is based on V.I. Gerchikov's typological model of motivation. Gerchikov developed a concept that, by outlining a person's overall work orientation, makes it possible to increase the efficiency of employees.

In general, the surveyed students were asked to identify their achievement motivation according to the four main types of Gerchikov's model: Instrumental Motivation Interest in the monetary value of the work performed. Labor is considered primarily as a means to achieve other goals, particularly material ones. Professional Motivation Interest in the content of work itself. The opportunity for self-realization through one's profession is of primary importance. Entrepreneurial (Mastery/Ownership) Motivation The key form of stimulation here is participation in management. Willingness to take full responsibility for the results of one's activity.

Lumpenized Motivation Characteristic of individuals with little to no interest in work. Marked by avoidance of responsibility and passive attitudes. Based on the psychological survey conducted using the *Motype* methodology, students expressed the following motivational tendencies:

Instrumental Motivation: Students in dual education – 23.65%, Students in traditional education – 19.46%, Professional Motivation: Students in dual education – 29.79%, Students in traditional education – 23.35%, Lumpenized Motivation: Students in dual education – 12.53%, Students in traditional education – 24.82%, Entrepreneurial Motivation: Most students, both in dual and traditional education, did not provide clear responses regarding this type.

Interpretation of Findings

The results indicate that the most prominent type of motivation among students in the dual education system is Professional Motivation. Such students are primarily interested in the meaningfulness, purpose, and responsibilities of their work. They show a strong inclination to gain recognition and respect for doing what they truly enjoy. The second most dominant type among dual education students is Instrumental Motivation, which reflects interest in the financial and material aspects of professional activity. Similarly, students in traditional education also recognized *Professional* and *Instrumental* motivations as leading types among all categories. However, significant differences were observed in the Lumpenized Motivation profile: students in traditional education displayed almost twice the level compared to those in dual education. This finding suggests that students in dual education demonstrate stronger interest in work and professional engagement, while traditional education students are more likely to exhibit passivity and avoidance of responsibility (Figure 2).

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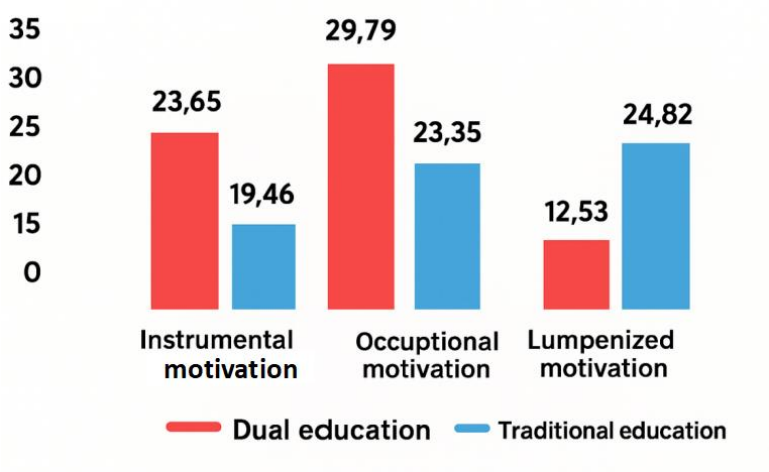

Figure 2. Results of psychological research on identifying the most important types of student motivation in education.

Conclusions

Based on the results of the sociological research, the following conclusions can be drawn: According to the findings on identifying the most prominent types of student motivation in dual and traditional education, the primary motivation type for students enrolled in the dual education system is "Professional Motivation." Individuals with "Professional Motivation" are characterized by a strong interest in the meaningful content, goals, and objectives of their work, as well as a desire to earn respect for the work they truly enjoy. This is considered a highly important indicator. For students studying within the dual education system, the second most dominant motivation type is "Instrumental Motivation," which is explained by their interest in the financial aspects of professional activity. The control group of students (traditional education) also identified these two types—"Professional Motivation" and "Instrumental Motivation"—as leading among all motivation categories. Among all motivational types, the study revealed significant differences in the "Lumpenized Motivation" profile, indicating that students in the dual education system demonstrate a stronger interest in work and in the meaningful content of professional activity compared to those in the traditional education system.

Recommendations

Based on the research findings, the following recommendations are proposed: To enhance the training of highly qualified engineers, it is advisable to improve the methodological support for implementing dual education, as well as to further refine teaching methods and the regulatory-legal framework. Continuing scientific research on identifying types of student motivation in dual education is expected to yield more effective and meaningful results.

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