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FOREIGN EXPERIENCES OF VOCATIONAL TRAINING FOR ENTREPRENEURSHIP

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Abstract

The article explores the theoretical perspectives of foreign economists who have conducted research on the nature of entrepreneurial activity and the necessity of professional training for the population. It provides an in-depth analysis of the formation and development of entrepreneurial education systems in economically developed countries, as well as the mechanisms used for personnel training. Additionally, drawing on the successful experiences of the United States and European countries, the article proposes potential directions for enhancing professional training for entrepreneurship within Uzbekistan's education system.

Keywords

entrepreneurial education, professional training, experience of developed countries, education system, mechanism for training personnel, experience of the USA and European countries, education system of Uzbekistan, entrepreneurial activity

Introduction

In today's globalized and competitive environment, the economic stability of countries increasingly depends on human capital, particularly the quality of entrepreneurial personnel. As a result, the professional training of individuals specializing in entrepreneurial activities has become a priority within national education systems. Economically developed countries are achieving notable success in this area by implementing comprehensive reforms and adopting innovative approaches.

Countries such as the USA, Germany, Japan, South Korea, and the Scandinavian nations place strong emphasis on developing entrepreneurial competencies across all levels of education. For example, in the United States, entrepreneurship education is integrated from school through to higher education. Leading universities like Harvard, the Massachusetts Institute of Technology (MIT), and Stanford have established dedicated business incubators, startup laboratories, and training programs based on real-case methodologies to nurture entrepreneurial talent.

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In contrast, Uzbekistan continues to face unresolved challenges in its labor market. As of early 2023, the country reported a high unemployment rate (8.9%) [1], the emigration of qualified personnel (8,790 individuals) [2], a significant level of informal employment (63%) [3], and low wages in several economic sectors. In response to these challenges, the state is actively seeking to promote entrepreneurial engagement among the population. As part of its employment strategy, the government is prioritizing the study and adaptation of best practices from developed countries to enhance the professional training of the population in the field of entrepreneurship.

Research methods

The article aims to examine the existing experiences of professional training for entrepreneurship within the educational systems of economically developed countries and to explore the potential for their implementation in the context of Uzbekistan. The study analyzes international experiences in entrepreneurship education, relevant regulatory and legal documents, statistical data, and scientific literature. A comparative method was employed to assess the educational systems of countries such as the USA, United Kingdom, Germany, and Finland, identifying both commonalities and differences.

Through the application of inductive and deductive methods, general conclusions were drawn from specific cases, and specific experiences were examined within the framework of general theoretical perspectives. The descriptive method was used to present the content and practical aspects of entrepreneurship education based on foreign experiences. Additionally, the analytical-synthetic method was applied to interpret the collected data, resulting in the development of practical proposals and recommendations for improving entrepreneurship education in Uzbekistan's education system.

The research utilized both scientific and empirical sources, including reports from international organizations, educational policy documents of the selected countries, and best practices in the field.

Literature review

The development of entrepreneurship at the current stage of market reforms in Uzbekistan is one of the most important priorities in the broader process of liberalizing the country’s economy. Addressing these specific objectives, in our view, requires a scientific analysis of various issues that are of common relevance to many countries, including the critical issue of training personnel for the business sector.

It is worth noting that the strengthening of the economic position of private entrepreneurs laid the foundation for the active formation of market economies in

several Western European countries. Simultaneously, new conditions for the development of entrepreneurship have transformed the very nature of this concept, due to the growing role of equipment and technology in production processes—thereby increasing the significance of technological knowledge. As a result, professionalism in entrepreneurship began to be shaped not only through practical experience, but also through formal education.

In parallel with these objective processes, the scientific understanding of entrepreneurship has also evolved. The historical roots of the scientific study of entrepreneurship as a distinct form of economic activity can be traced back to the classical economists, such as Adam Smith, and continued through the works of neoclassical economists like J.M. Keynes.

In the current era of globalization and the rise of the information society, approaches to understanding the nature of entrepreneurship and its role in economic development continue to evolve and improve. The American scholar Peter Drucker introduced the concept of "entrepreneurial management", which stems from the necessity for organizations to be adaptable to innovation and constant change. According to Drucker, this approach requires not only structural flexibility but also effective human resource management, especially in relation to managerial staff [4].

Another significant contributor to the theory of entrepreneurship is A. Thünen [5], who described entrepreneurs as individuals who "know how to take risks, make unconventional decisions, take responsibility for their execution, and as a result, earn unplanned, unexpected profits." In our opinion, this perspective directly addresses the essence of entrepreneurship as a professional economic activity.

Among modern researchers, B. Santo stands out for emphasizing the role of leadership in entrepreneurship. He argued that a business enterprise can only succeed if it is led by an innovative manager [6]. This underscores another important dimension of entrepreneurship—as a unique and dynamic form of modern human economic activity.

As the understanding of the nature of entrepreneurial activity has expanded, the need for training qualified personnel for a market economy has been theoretically justified in the works of many prominent scholars. Despite differing theoretical perspectives, there is a shared consensus on the importance of preparing entrepreneurial personnel.

The shifting role of information and knowledge in today's economic landscape is particularly relevant for post-industrial economies. This has been explored in Daniel Bell's information theory of value, where he argued that while traditional

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economists continue to focus on land, labor, and capital, thinkers like Joseph Schumpeter introduced new variables such as entrepreneurial initiative. Bell further contended that "information and theoretical knowledge constitute the strategic resources of post-industrial society," and that science, as a form of general knowledge, has become the main productive force in modern economies [7].

Analyses

The experience and practical approaches in the field of vocational training for entrepreneurship in the United States are considered among the most advanced and effective in the world. The education system in this field is based on the collaboration of universities, government initiatives, and the private sector. It aims to foster an entrepreneurial culture, support innovation, and contribute to socio-economic development. Entrepreneurship education in the U.S. is particularly notable for its emphasis on practical approaches, which are implemented in the following ways:

1. Experiential Learning: Based on the theory of experiential learning, students acquire entrepreneurial skills through direct experience. For example, Stanford University's d.school Design Thinking program teaches students to apply empathy, identify problems, develop solutions, and prototype in order to tackle real-world challenges. This approach enhances creative and practical problem-solving abilities.

2. Project-Based Learning: This method allows students to develop and test business ideas through structured projects. It enables them to engage with the entrepreneurial process in a hands-on manner.

3. Collaborative Learning: Group-based learning activities help students build teamwork, communication, and leadership skills. For instance, Babson College's Entrepreneurship Program includes collaborative projects in which students develop business plans and receive expert feedback [8].

Furthermore, several government programs and private sector initiatives also support entrepreneurship education in the U.S. Key examples include:

I-Corps Program: Developed by the U.S. National Science Foundation (NSF), the I-Corps program provides engineers and scientists with entrepreneurial training. Participants receive up to $50,000 to test and refine their business ideas. Inspired by Stanford's Lean LaunchPad course, this program is now implemented at numerous universities globally [9].

The Founder Institute: Established in Palo Alto in 2009, this business incubator offers a 14-week program designed to guide new entrepreneurs in developing ideas and launching companies. Participants are required to establish a legal business entity before completing the program. As of 2025, over 7,500 startups have emerged from the program, collectively raising $1.85 billion in funding [10].

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The U.S. system also utilizes innovative models such as the Triple Helix Model, which emphasizes collaboration between universities, industry, and the government. Institutions like Stanford University and MIT actively support this model and contribute to technological advancement and entrepreneurship.

Another innovative approach is the Blended Entrepreneurship Education Model, which combines online and offline instruction, and integrates Western, local, and indigenous knowledge. This model provides students with diverse entrepreneurial competencies [11].

Thus, the U.S. entrepreneurship education system is built upon partnerships between education providers, government initiatives, and the private sector. Practical teaching methods—such as experiential, project-based, and collaborative learning—play a vital role in shaping entrepreneurial skills. Active involvement of government programs and private incubators supports the development of future entrepreneurs.

The German vocational education and training (VET) system is widely recognized as one of the most effective in the world, especially for fostering entrepreneurship. Its key features include a dual education system, close collaboration with industry, digital innovation, and practical orientation. The major components of the German VET model are outlined below:

1. Dual System: Germany's dual education system integrates theoretical instruction with hands-on experience. More than half of vocational students split their time between training in companies and attending vocational schools. Originating from the Vocational Education Act of 1969 and updated in 2020, the system currently supports over 1.2 million students across 325 recognized occupations [12].

2. Industry Partnerships and Innovation Hubs: German universities and research institutions maintain strong ties with industry. For instance, UnternehmerTUM, a startup lab at the Technical University of Munich, was founded in 2002 and delivers more than 20 programs annually to over 5,000 participants. It focuses on prototyping, pitching, and CEO training. By 2023, its startups had attracted over $2 billion in investment [13].

3. Digitalization and the "VET 4.0" Initiative: This initiative promotes digital transformation in vocational education by updating curricula, teaching methods, and assessment processes. It also includes financial support for small and medium-sized enterprises (SMEs) to improve their digital capabilities [14].

4. Learning Factory Models: These models, implemented in many universities, offer students practical training environments. For example, the Process Learning

Factory CiP at the Technical University of Darmstadt, established in 2007, provides hands-on experience in Lean manufacturing and Industry 4.0 principles [15].

The strengths of the German vocational training system are evident through:

- low youth unemployment: Germany's youth unemployment rate is just 5.7%, a testament to the success of the dual education system [16];

- alignment with industry needs: The VET system evolves to meet industry demands, particularly in digitalization and innovation;

- support for SMEs: Government financial support enables SMEs to participate actively in vocational training, boosting competitiveness.

Beyond Germany, Scandinavian countries also offer valuable insights into vocational training for entrepreneurship. Finland and Sweden, for example, emphasize creative thinking, autonomy, and teamwork from an early age—skills essential for entrepreneurial success. Their education systems prioritize social cohesion, economic competitiveness, and upward mobility.

In Sweden, the VET system was reformed in 1991 into a school-based model, which weakened ties with workplaces and led to increased unemployment. Nevertheless, entrepreneurship is now embedded into the school curriculum, helping to foster an entrepreneurial mindset.

In Norway, the 1994 reform introduced the 2+2 model: two years of school followed by two years of practical training. Norway's VET system blends school-based and corporatist models, maintaining strong workplace connections and improving employment outcomes [17].

Denmark employs a dual VET model similar to Germany's, with active participation from trade unions and employers. This structure ensures efficient transitions from school to work and contributes to low youth unemployment rates[18].

Common features of vocational training in Scandinavian countries include:

- integration of entrepreneurship into school curricula [19];

- strong ties between vocational education and the labor market;

- collaborative partnerships with social actors like trade unions and employers;

- flexible systems responsive to socio-economic changes and undergoing continual reform.

The United Kingdom also demonstrates an innovative approach to entrepreneurship training, integrating business skills into vocational education to support economic development. Key programs include:

1. Peter Jones Enterprise Academy: Founded in 2008 by entrepreneur Peter Jones, the academy teaches students practical business skills such as planning,

finance, and marketing. It partnered with 28 colleges in the 2021–2022 academic year [20].

2. Young Enterprise: Established in 1962, this program teaches entrepreneurship and financial literacy. Its "Company Programme" enables students to start and manage real businesses. Participants reportedly earn £40,000–£45,000 annually by age 30—significantly more than their peers [21].

3. SETsquared Partnership: A business incubator formed by five southern UK universities in 2002. It supports startups and strengthens university-industry ties. In 2015, SETsquared was named the world's top university-based business incubator [22].

The UK also integrates entrepreneurship into broader vocational education through:

1. T-Level Programs: These new qualifications combine in-depth vocational study with industry experience. In 2024, reforms allowed up to 20% of the placement component to be completed remotely—beneficial for digital skills development [23].

2. The King's Trust: Since 1983, the Trust has supported young people aged 18–30 with mentorship, funding, and training to start their own businesses. To date, it has helped 86,845 individuals [24].

Partnership initiatives also support specific sectors. In Birmingham's Jewellery Quarter, for instance, businesses collaborate with schools to guide youth into careers. The Goldsmiths' Company Charity donated £10 million to establish the Goldsmiths Institute at Aston University to train specialists [25].

Additionally, the UK is active internationally. Through cooperation with Thailand, UK colleges such as Grŵp Llandrillo Menai are mentoring institutions to implement new entrepreneurship education models.

In conclusion, analysis of the U.S. and European approaches to vocational training for entrepreneurship reveals a multifaceted system comprising several core elements:

- innovative educational content: Curricula go beyond theory to include business planning, financial literacy, marketing, and digital technologies.

- incubator and accelerator centers: Many universities host entrepreneurship centers that help students transform ideas into viable businesses.

- international collaboration: Startup and entrepreneurship programs often involve partnerships with international organizations and venture capital firms.

The benefits of vocational training for entrepreneurship are both direct—such as increased earnings and productivity—and indirect, including improved living standards, reduced unemployment and crime, and greater social cohesion. These

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programs also contribute to technological innovation and broader national development.

As shown in Table 1, although components of entrepreneurship education from the U.S. and Europe have been introduced into Uzbekistan's system, they are fully integrated across all stages of education in the U.S., whereas Germany's implementation is primarily focused on post-school vocational training.

Table 1. **Components of entrepreneurship education in different countries**

Country	In school education	In higher education	Incubators	Cooperation (international)
USA	+	+	+	+
Germany	□ (low)	+	+	+
Scandinavia	+	+	□	□
Great Britain	+	+	+	+
Uzbekistan	□	□	□	□

(+ – available, □ – partial, x– absent)

Source: Compiled by the author based on comparative analyses.

On the contrary, in Scandinavian countries, entrepreneurship education is more emphasized at the school and higher education levels. Uzbekistan is taking many measures to support small business and entrepreneurial activities, including paying special attention to entrepreneurship education, but as we can see from the table, these measures are not enough.

Conclusion

In conclusion, it can be noted that the vocational education system for entrepreneurship in developed countries is a model for Uzbekistan, and the introduction of its elements adapted to local conditions will serve to ensure youth employment and economic development, and by implementing these experiences in practice, it will be possible to achieve sustainable and innovative development in the republic. To this end, the following measures are proposed to reform the education system in Uzbekistan based on foreign experience in order to develop entrepreneurship:

– **strengthening entrepreneurship education, for this purpose, forming an entrepreneurial spirit in students by integrating entrepreneurship into school programs;**

– increasing youth employment through the widespread introduction of the dual education system in Uzbekistan;

– implementing innovative projects by strengthening cooperation between higher education institutions and industry;

– establishing startup incubators at each university;

– improving the quality of vocational education by introducing educational programs focused on digitalization, such as "Vet 4.0";

– improving students' practical skills by introducing German "learning factory" models in higher education institutions in Uzbekistan;

– establishing joint entrepreneurship education programs with foreign universities;

– using innovative methods such as case-study, project-based learning, simulations in the process of vocational education;

– strengthening cooperation with social partners, i.e. increasing the effectiveness of the vocational education system for entrepreneurial activity through cooperation with trade unions and employers;

– making the education system adaptable to social and economic changes in the professional training of personnel for entrepreneurial activity.

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