

Comparative Analysis Of Systems Of Vocational Education In Ukraine, The United States Of America And Great Britain

Victor Parzhnytsky *, Olexander Savenko *, Olga Kaitanovska *

* State scientific institution "Institute of Education Content Modernization", Vasylia Lypkivskogo street,36, Kyiv, Ukraine

DOI: 10.29322/IJSRP.12.07.2022.p12744

<http://dx.doi.org/10.29322/IJSRP.12.07.2022.p12744>

Paper Received Date: 20th June 2022

Paper Acceptance Date: 5th July 2022

Paper Publication Date: 12th July 2022

Abstract- We emphasize that in an autonomous mode, in a closed pedagogical and industrial environment, the modernization of vocational education is impossible and not a real thing. International cooperation, pedagogical dialogue, identification of commonalities and differences in the systems of vocational education of different countries and Ukraine are extremely necessary here.

It is a well-known truth about the impossibility and inexpediency of mechanical transfer of this or that model of education, which was born, formed and developed in another country, or specific methods of foreign scientists and practitioners to the educational field of Ukraine and other countries. Domestic ideas, respectively - concepts, models, methods, educational institutions of a new type must go their own way, with consistent, scientifically sound consideration of national traditions, specific conditions and opportunities, as well as global trends that meet the needs of solving global problems.

The way of revealing progressive ideas of this or that foreign experience, their philosophical, comparative-pedagogical analysis, clarification of conceptual bases of formation and development of concrete educational models, their comparison with domestic approaches, concepts and models can be expedient and perspective. On this basis, possible directions for the implementation of these ideas in another country, including Ukraine, provided scientific and methodological support, taking into account a set of factors (socio-cultural, economic, sociological, psychological, personnel, material, technical) and direction of public policy in this area.

We emphasize that the achievement of this goal contributes to comparative pedagogical and psychological research aimed at comprehensive objective study and understanding of the world educational process, identifying global trends, progressive ideas in concepts and models of education in different countries and forecasting education in each country, specific region or the world. Thus the main purpose of the research is very important, namely to study systems of vocational education in Ukraine, the United States of America and Great Britain and to conduct their comparative analysis.

Index Terms- vocational education, comparative analysis, educational system, English-speaking countries.

I. INTRODUCTION

Education is not preparation for life, it is life." (James Watson) According to an American scientist, education is life; it is such a long and complex process that it just needs a lot of attention, time and effort.

Education systems in any country are designed to promote the main tasks of socio-economic and cultural development of society, because it is the school, university prepares a person for active work in various spheres of economy, culture, political life of society. The successful development of a country largely depends on the level of knowledge. The most important thing is in human destiny.

Relevance: Determining strategic directions for the development of education systems worries almost the entire world community. Current and future employers are interested in such an employee who has the following qualities: - think independently and solve various problems (i.e. to apply the gained knowledge to solve them); - have creative thinking; - have a rich vocabulary based on a deep understanding of the humanities. Vocational education is a qualitatively defined level of the education system, which occupies a significant place in meeting the educational needs of the individual and society. Due to the fact that education is being modernized all over the world, we wondered what a modern young person needs in order to realize himself in modern living conditions. What is the role of vocational education, and what should it be in the 21st century to prepare people for life in our rapidly changing world? How are school graduates taught in different countries of the world, how do vocational institutions abroad differ from our Ukrainian ones? To answer these questions, we decided to compare the education systems in developed countries, namely the systems of vocational education in Ukraine and English-speaking countries (UK and USA).

The object of research is the system of vocational education. The subject of the research is the features of vocational education in Ukraine and English-speaking countries. The purpose of this

work is to describe and analyze the system of vocational education in Ukraine and abroad. These are the United States, Great Britain and Ukraine. The purposes of this work are 1. To study the system of vocational education in Ukraine. 2. To study the system of vocational education in Great Britain and the USA. 3. Conduct a comparative analysis of vocational education systems in these countries.

Research methods: Theoretical (analysis of the literature on education in English-speaking countries and Ukraine); descriptive and comparative.

II. RELEVANT LITERATURE

Many Ukrainian and foreign scholars have addressed the problems of vocational education in Great Britain. General issues of teaching and education, trends in the development of the English system of vocational education were studied by Ukrainian scientists (V. Kudin [6], O.Kurbatov [7]). Some issues of professional training in the UK are analyzed in the works of S. O. Sysoeva, A.M. Aleksyuk, P.M. Volovik, O.I. Kulchytska, L.E. Sigaeva [8]. Among the well-known Ukrainian scientists who studied the main characteristics of the vocational education system are Luzan P.G., Manko V.M., Nesterova L.V., Romanova G.M. [14] and others. This question was the subject of research by foreign scholars S. Price [9], A. Smithers [12], J. Tolley [15]. Ukrainian scientists V.Radkevych, N.Bugay [11] and foreign scientist R. Dearing [2] approached the issue of determining the process of formation of professionalism of specialists of certain professions at different times.

Many scientists have studied the system of education in the United States such as V.Bondarenko [1], L.N. Tarasyuk [13]. The issues of general historical development of the US higher education system are discussed in the works of W. James, and others. The main trends in the development of US higher education in modern conditions are highlighted in the studies of E. Kaverina, V. Kudina, N. Nychkalo [3]. Problems of improving the quality of education in the United States are considered in the works of A. Varlamova [16], O. Kalinina [5]. Some of the benefits of American education are reflected in the sites of Harvard, Illinois, Columbia, and other universities. K.N. Tseikovich [12] and Internet resources study the current state of the education sector in the United States.

III. VOCATIONAL EDUCATION IN UKRAINE

Vocational education as a component of the education system of Ukraine is a set of pedagogical and organizational and managerial measures aimed at ensuring the acquisition of knowledge, skills and abilities in their chosen field of professional activity, development of competence and professionalism, education of general and professional culture.

Considering the first question, it is necessary to analyze the system of vocational education, which is made up in accordance with Art. 4 of the Law of Ukraine "On Vocational Education" vocational schools, regardless of ownership and subordination, conducting activities in the field of vocational education,

educational and methodological, scientific and methodological, scientific, educational and industrial, educational and commercial, publishing and printing, cultural and educational, physical culture and health, computer and other enterprises, institutions, organizations and their governing bodies that provide or provide training for skilled workers. It is necessary to characterize each component of this system, highlighting the features of each of its components.

The issue of management and organization of vocational education is regulated by Section II of the Law of Ukraine "On Vocational Education".

The state bodies of management of vocational education include:

- specially authorized central executive body in the field of vocational education;
- ministries and other central executive bodies which vocational schools are subordinated to;
- the Council of Ministers of the Autonomous Republic of Crimea, regional, Kyiv and Sevastopol city state administrations and the bodies of management of vocational education created by them;
- intersectoral council for vocational education. Vocational education is carried out in vocational and technical educational institutions in the following forms: day, evening, full-time and part-time, distance, external, according to individual curricula.

The degree of vocational education of citizens is determined in vocational schools by the appropriate levels of qualification and complexity of professions and educational qualification level. Each degree in a vocational school has theoretical and practical completion and is confirmed by assigning graduates (students) educational and qualification levels "skilled worker", "junior specialist", "bachelor" in accordance with the acquired professional knowledge, skills and abilities. Regulations on vocational and technical education are approved by the Cabinet of Ministers of Ukraine. Organizational and legal principles of the vocational school are determined by Section III of the Law of Ukraine "On Vocational Education". Using the recommended regulations, it is necessary to know the definition of vocational school and its types, which include:

- vocational school of the relevant profile;
- vocational school of social rehabilitation;
- higher vocational school;
- professional lyceum;
- colleges;
- professional lyceum of the relevant profile;
- vocational school;
- art vocational school;
- higher art vocational school;
- agricultural school;
- higher school-agricultural firm;
- school-factory;
- center of vocational education;
- center of professional education;
- training and production center;
- center for training and retraining of workers;
- training and course plant;
- training center;
- other types of educational institutions that provide vocational education or provide vocational training [4].

Since independence, Ukraine has formed a network of vocational schools (hereinafter - vocational schools) of various

forms of ownership, namely: state vocational schools - 991, including vocational schools of the Ministry of Education and Science - 870 (with a contingent of 405.1 thousand students); Vocational schools in the structure of universities - 46 (with a contingent of students - 18.4 thousand); Vocational schools in penitentiary institutions - 75 (with a contingent of students - 7.7 thousand); non-state ownership - 924 vocational schools (with a contingent of students, listeners - 89 thousand) (as of 01.01.2020). The network of vocational schools of the Ministry of Education and Science is formed in the following sectoral directions: industry - 309 vocational schools; construction - 177 vocational schools; agro-industrial complex - 252 vocational schools; sphere of services - 132 vocational schools. At the same time, a network of state vocational schools of a new type was created. In particular (as of 01.01.2020): 181 higher vocational schools; centers of vocational education - 57; professional lyceums - 482.

Article 22 of the Law of Ukraine "On Vocational Education" defines the main powers and activities of vocational schools, which include:

- organization of the educational process, choice of forms and methods of teaching; educational-production, educational-educational, educational-methodical, financial-economic and production-commercial activity;
- development of working curricula for professions and working curricula for subjects based on standard curricula and standard curricula, determination of the regional component of the content of vocational education, which are approved in the prescribed manner; - development of rules of admission of students to the educational institution on the basis of standard rules of admission;
- formation together with the governing bodies of vocational education of admission plans for students, listeners, taking into account the state order, the needs of the labor market and the needs of citizens in vocational education and orders of enterprises, institutions and organizations;
- organization of food, material support and household services for students;
- certification of pedagogical workers;
- organization of internships for teachers at enterprises, institutions, organizations;
- implementation of professional training of the unemployed population;
- organization of industrial training of students, trainees at enterprises, institutions and organizations;
- providing measures for labor protection of students, trainees, employees;
- material and technical support of the educational process;
- determining the structure and staffing, taking into account the established salary fund; - ensuring the quality of vocational training and education of students.

A graduate of a vocational school who has successfully passed the qualification attestation is awarded the educational and qualification level "skilled worker" in the acquired profession of the relevant category (category).

A graduate who has completed the relevant course of study in an accredited higher vocational school, college, center of vocational education of a certain level of accreditation, may be awarded the educational qualification level "junior specialist" and "bachelor". A graduate of a vocational school who has been awarded the educational and qualification level "skilled worker"

is issued a diploma, a sample of which is approved by the Cabinet of Ministers of Ukraine. A graduate of a vocational school who has completed general secondary education is issued a relevant document on standard secondary education. A person who has mastered the course of vocational training and successfully passed the qualification certification is issued a certificate of assignment or improvement of working skills, a sample of which is approved by the Cabinet of Ministers of Ukraine.

A graduate of a higher vocational school and a center of vocational education, who has been awarded the qualification of "junior specialist" and "bachelor", is issued a diploma, a sample of which is approved by the Cabinet of Ministers of Ukraine.

The legislation foresees types of control of knowledge, skills and abilities of students, listeners, determines the study and vacation time of the student (listener, student), the rules of training and industrial practice. Vocational educational institutions, education management bodies, founders carry out current, thematic, intermediate and initial control of knowledge, skills and abilities of students, listeners, their qualification certification.

Vocational education may include science and mathematics, humanities, physics, general engineering, vocational theory and vocational training. Natural-mathematical, humanitarian, general technical, professional theoretical training is carried out in specialized classrooms, classrooms, laboratories and is conducted in the following forms: different types of lessons, lectures, theoretical seminars, practical seminars, laboratory-practical classes, etc .; individual lessons for students, listeners; performance of individual tasks by students, listeners (abstract, calculation work, course project, final and intermediate stage qualification work, diploma project); study tour; other forms of organization of theoretical training [7].

IV. VOCATIONAL EDUCATION IN THE UNITED KINGDOM

Today, the United Kingdom is a highly developed country, and its education system is considered one of the most prestigious and best in the world. There are a number of reasons for this: first, diplomas and certificates obtained in the UK are recognized worldwide. Secondly, studying in the UK is a great opportunity to improve your English language skills, which is very important for building a future career in any field of international business. And thirdly, nowadays it is considered very prestigious to have an education obtained abroad, especially in the UK. Why is it considered so prestigious? And why do so many young people now want to get an education in this country and not in ours, for example? To answer these questions, we conducted a scientific research. Vocational education in the UK is very popular and in demand among both local students and foreigners. The reason for this popularity is the availability and quality of vocational education in the UK. The details of the study in the three parts of the United Kingdom - England, Wales and Scotland - differ. In general, the whole education system is divided into two sectors: public and private. Admission and payment conditions, curriculum, and semester length in different sectors may vary, but the basic structure of education, exam conditions, and state-level training are the same for all educational institutions. Vocational education in the UK provides the full range of knowledge and skills needed for a successful career in your chosen profession.

There are several types of vocational schools in the UK: 1. Many schools offer secondary special education programs such as A-level, International Baccalaureate, Scottish Higher, NVQ and SVQ. 2. Sixth grade colleges give students an academic specialization and prepare them for admission to higher education. 3. Colleges of professional and higher education. There are two types of colleges: Colleges of Further Education (graduates are issued a certificate of profession, although excellent students receive a diploma equivalent to A-level) and colleges of higher education (College of Higher Education). These colleges, like universities, offer degrees (bachelor's level only) and issue diplomas of higher education. Colleges are usually smaller than universities. College of Further Education (FE) The concept of "further education" (FE) The concept of "further education" includes all types of post-secondary education, except higher education, designed to obtain or improve skills. Colleges can be private or public, multidisciplinary, working in only a few areas of study or specialized. The duration of the training course varies greatly - from a few weeks to two years. It all depends on the specialization and what qualification the student wants to get. The "ceiling" for the college is a higher diploma of professional education. Further education usually means learning the professional skills or the skills needed by employers. At the same time, after completing most courses or institutes of further education, no document is issued - in this case, for most graduates, the acquired skills are more important than a diploma. Vocational training is a very flexible structure that is constantly reviewed and updated. Further education also provides continuing general education and admission to higher education for people of all ages. Students use further education to study academic disciplines, training and simply for general development. Further education colleges usually offer a number of professional courses as well as academic programs. After completing many of these courses, the student can immediately enter the second year of university [3].

There are about 500 further colleges in England and Wales. There are about half a million full-time students in these colleges. More than three million students study at the evening department. Many people rush to college for financial reasons: it is much cheaper to study there than in universities, (tuition costs about 2.5-3.4 thousand pounds or \$ 4-5.5 thousand per year, depending on the course). In the UK, you can always find a suitable program of secondary special education to master almost any specialty. In addition, it should be noted that the qualifications awarded by educational institutions in the UK in such specialties as business administration, information technology, engineering, art and design, are among the most prestigious and recognized in the world. In the same range are such professional fields as hotel and restaurant business, tourism, clothing design, photography, sound design, film production and advertising. A high school diploma (GCSE) is enough to enter the college.

Each educational institution in the UK independently forms the requirements for entrants. In British colleges, a wider range of subjects than in schools, among the subjects studied may be, for example, psychology or sociology, and there are courses that prepare for the GCSE certificate. In addition, seminars, refresher courses for professionals, foreign language teaching, tailoring and sewing, embroidery, computer science, yoga, floristic. As a rule, in such educational institutions there is no specialization in one area - on the contrary, they have many faculties of different

profiles. For example, Barry College in Cardiff (Wales) has faculties of aerospace engineering, business and management, health, design and art, tourism, hospitality, sports, construction. Falkirk College in Scotland trains kindergarten teachers, furniture makers, musicians, employees of radio stations, etc. In almost every college, you can get a specialty, one way or another related to the beauty industry. These are not only traditional manicures, pedicures and hairdressing, but first of all cosmetology, massage, aromatherapy and a set of procedures related to face and body care, health and relaxation. Among the professions offered by colleges are not only socially significant (nurses, environmentalists, specialists in working with children with developmental disabilities), but also simply in demand (fitness trainers, accountants, web designers, etc.). Among Langside College's most popular programs are gardening and golf field management. It is not necessary to prove that the most skilled florists in the world live in Great Britain, it is enough to look at gardens in British suburbs, flower beds in parks and facades of local pubs hung with cascades of plants; what to say about the exhibition in Chelsea, which defines high fashion in floriculture. On the territory of the college, there are playgrounds where students work on their projects: they get abandoned pieces of land on which they must arrange their own flower beds, alpine slides, raspberries, vegetable beds. There is a lot of work for those who are learning to create and maintain golf courses: choosing grass, mowing, planning a field with artificial obstacles, etc. In other colleges, you can find similar courses for those who practice, for example, football fields. The teaching methods in the UK are such that the responsibility for the success of learning rests largely with the student. All research work is done by them independently, and, therefore, a lot of work.

Each British college seeks to provide a variety of forms of education that allow students to improve their skills, rise to degrees and levels of education. The purpose of college is to teach a person to learn. It is believed that the student and the teacher are not subordinates and superiors, but partners in the learning process; in the classroom they address each other by name as peers. Independent work in the library and writing various essays and essays take a lot of time.

From the very beginning, students are encouraged to look for their own style and defend their own ideas, even the craziest. Teachers teach wards to work in a team - to consult with each other, to criticize, to share ideas. Qualification standards for vocational training have been adopted in England and Scotland. Qualification certificates are issued to persons who have demonstrated the appropriate level of knowledge and practical skills. This is a great incentive for lifelong learning. The National Vocational Qualification (NVQ) is based on national qualifications standards. It has five levels, the certificate of the first level implies the controlled mastery of the simplest work operations, while the certificate of the fifth gives the right to hold positions that involve the most complex management functions. A similar Scottish Certificate of Professional Qualification, SVQ, is recognized throughout the UK. NVQ (National Vocational Qualification) - a qualification that confirms the ability of the graduate to work in any field of business or industry. Training takes place in the workplace. Moreover, certain deadlines for the program are not set. To qualify, a student must demonstrate their ability to perform work in accordance with all standards. GNVQ

(General National Vocational Qualification) is a multilevel qualification that provides the basis of knowledge in the chosen field. GNVQ will help a British student to continue their education in Further Education Colleges or get a job. To enter the university you need to undergo advanced training in this program (GNVQ Advanced). ND (National Diploma) - a qualification similar to the advanced level of GNVQ. Training for this qualification ends with examinations and the issuance of a Higher National Diploma in almost any academic or professional specialty. It is of great importance for those who plan to pursue a career immediately after graduation without a bachelor's degree. However, with such a diploma, career opportunities are limited. At the same time, he allows you to enter the University for a bachelor's degree. Many vocational colleges offer study programs, after which you can immediately enter the 2nd year of university. The training period will last only 2 years. Benefits of vocational education in the UK Secondary vocational education in the UK is more accessible than higher education.

In addition, there are other significant advantages of obtaining vocational education in this country: 1. Higher education. 2. Obtaining prestigious qualifications that are recognized worldwide. 3. Wide choice of educational programs. 4. Active and high-quality preparation for employment. 5. Development of English skills. 6. Study in a multicultural and multinational environment, combined with the age-old academic traditions of Great Britain [5].

The prospect of developing professional education in the UK is the comprehensive implementation of the practical component in the educational process, as well as taking into account the latter in the certification system. For example, the National Federation of Hairdressers, as well as physicians, lawyers, financiers, set certain requirements for the quality of training of future professionals. Higher professional education significantly improves its position in the market of educational services. The main reason for this progress is the organization of joint training and methodological councils, in the activities of which employers participate, which help to develop curricula, practical component and provide funding for such education. The future of higher professional education in the UK depends on such fruitful cooperation. It is known that if higher professional education can provide real opportunities for young people to acquire practical skills that will help them get a good job in the future, then young people will strive to get it. In the UK, unfortunately, the opposite trend is happening: vocational education is considered provincial, ie for those who cannot get an academic education. Those who did not pass the 11+ level study in modern secondary schools. ONCs and HNCs are designed for those who have achieved a sufficient level in the secondary education program and seek to obtain an A-level, and new "professional" courses at universities are designed for those who have a level lower than "A". This approach, of course, has certain advantages in flexibility and motivation. However, there are still doubts about the objectivity of the examination. There are attempts to compare internal and external verification systems, but this has only a partial impact on performance.

The most prominent feature of our vocational education system, therefore, is the bewildering variety of different approaches. The menu for 14-19 year olds currently includes:

- work-related courses at 14-16, some bearing qualifications, others on a largely experiential basis (largely resulting from a perception that vocational education is appropriate for those who find mainstream academic courses unattractive or just too difficult);
- new GCSEs in vocational subjects' beginning this year (resulting from a desire to place vocational education courses in a relationship of 'parity of esteem' with general ones);
- intermediate and foundation GNVQs (resulting from a worry that replacing these with vocational GCSEs, which was the original intention, might cut off options for some students);
- Key Skills offered as part of all post-16 curricula (resulting from a belief that a general preparation for work in the form of 'employability' skills was the best approach and could be fostered in any subject context);
- vocational A- levels in both single and double form, and also in AS variants (resulting from a desire to promote parity of esteem by following an A-level format while keeping the option of 'large' courses equivalent to two A- levels open);
- BTEC First and National Diplomas and Certificates (the qualifications which GNVQs were meant to replace before they were – nearly – replaced by vocational A- levels);
- technical certificates (resulting from a desire to introduce elements of theoretical knowledge into apprenticeships, but also – no doubt – available for full-time students);
- 'traditional' CGLI and RSA awards (which, together with modified versions of the BTEC Certificates, may be counted as technical certificates);
- NVQs taught on a full-time basis in colleges (resulting from the desire for a comprehensive desire for competence-based qualifications moderated by a realization that not all young people had access to the workplace and that the workplace was not always the most efficient location to teach and assess competence);
- a range of other taught courses with varied provenance ranging from the Certificate in Ear Piercing offered by the Vocational Training Charitable Trust, through the Awarding Body Consortium's Certificate in Cake Decoration to the Certificate in Employment Skills awarded by the Northern Council for Further Education [6].

In this regard, the UK government set the following recommendation for further development of vocational education in this country:

Priorities for employer engagement should be clearly defined and the rationale for seeking that engagement should be set out by the governments of England and Wales. Evidence on employer engagement should be further developed. Fragmented surveys should so far as possible be consolidated and coordinated.

Given that complexity and volatility in the VET system hinder employer engagement, the institutions of the VET system should be simplified and stabilized.

As a way to engage employers so as to reach the skills targets identified in the Leitch report, governments in England and Wales

should explore measures including those designed to reduce the cost of training, the establishment of a stronger evidence base to encourage employer support for training, and, possibly, the use of compulsive measures including training levies.

Attempts to foster employer engagement in England and Wales should be closely linked to the development of the apprenticeship system.

Governments in England and Wales should take account of previous experience, including international experience, when extending the market in VET provision. In particular users need good information about the quality of different programmes and institutions.

England and Wales should take account of international evidence more routinely in its policy-making process.

VOCATIONAL EDUCATION IN THE USA

The 1990 Perkins Act defines vocational education as "organized educational programs offering a sequence of courses which are directly related to the preparation of individuals in paid or unpaid employment in current or emerging occupations requiring other than a baccalaureate or advanced degree." While vocational education is provided at both the secondary and postsecondary levels, its focus differs somewhat at each level.

The objectives of vocational education are more varied at the secondary than at the postsecondary level. Secondary vocational courses can be classified into three types: (1) consumer and homemaking education; (2) general labor market preparation; and (3) specific labor market preparation. Specific labor market preparation courses teach students the skills needed to enter a particular occupational field. Such courses can be grouped into the following occupational program areas:

Agriculture;

Business and office;

Marketing and distribution;

Health;

Occupational home economics;

Trade and industry (including construction, mechanics and repairs, and precision production);

Technical and communications [1].

In addition to this occupationally specific curriculum, some secondary vocational courses provide general labor market preparation, teaching general employment skills-- such as introductory typing or wordprocessing, industrial arts, career education, and applied academic skills--rather than preparing students for paid employment in a specific occupation. Finally, consumer and homemaking education courses, unlike occupational home economics courses, prepare students for unpaid employment in the home. While this publication provides information on all three types of secondary vocational courses, it focuses primarily on the occupationally specific curriculum.

Vocational education at the secondary level has traditionally had several objectives, including providing students with general employability skills and preparing them to enter paid and unpaid employment in specific occupations. However, in recent years, the goals of vocational education have expanded to include preparing students not only for entry into work but also for career advancement and entry into further education and training. For instance, educators have been called upon to integrate academic and vocational education. Secondary vocational education is

provided primarily through three types of public high schools: (1) comprehensive high schools (the typical U.S. high school); (2) area vocational schools (regional facilities that students attend part of a day to receive their occupational training); and (3) full-time vocational high schools (schools that offer academic studies but focus on preparing students for work in a particular occupation or industry). The latter two types are referred to collectively as vocational schools. The National Assessment of Vocational Education (NAVE) recently found that most secondary vocational education is provided in comprehensive high schools, with vocational schools enrolling about 10 percent of secondary students and accounting for about 12 percent of vocational course taking. Because of the limited capacity of available datasets to provide information on the three types of schools, this publication generally treats secondary vocational education as a single system. While occupationally specific courses are organized into program areas, high school students typically do not formally enroll in an occupational program. Instead, they may take one or more courses in a single occupational program, or courses scattered throughout the occupationally specific curriculum. Moreover, while the majority of students take occupational courses during their high school careers, they do so for a variety of reasons. Some students take introductory business or technical and communications courses to gain hands-on computer experience, whereas others are required by their high schools to complete a vocational course in order to graduate. Only a minority of students complete a coherent sequence of courses preparing them for employment in a specific occupational field. Indeed, the sequence of courses defining an occupational program varies among high schools and school districts across the country.

Consequently, it is not possible--nor very useful--to label students as "vocational students" based on a single definition. Instead, this publication provides several alternative measures of participation in vocational and occupationally specific education at the secondary level. The smallest unit of measure is a course or a credit, and data are provided on the percentage of public high school graduates completing at least one course and on the average number of credits they earned in different vocational and occupational areas. Some tables provide information on heavy vocational course takers, those earning large numbers of vocational or occupationally specific credits.

The federal regulations associated with the 1990 Perkins Act defined a coherent sequence of courses as "a series of courses in which vocational and academic education are integrated, and which directly relates to, and leads to, both academic and occupational competencies. However, federal datasets rely largely on analyses of student transcripts to determine high school course-taking patterns. While both flexible and reliable, these transcript studies have limited capacity to provide information on the content of courses, such as what specific competencies they teach. Alternatively, this publication uses several measures of concentration in vocational education to examine graduates' propensity to take a series of related vocational courses. Specifically, public high school graduates are identified as vocational "concentrators" if they earned 3 or more credits in a single occupational program, and as vocational "specialists" if they earned 4 or more credits in a single program with at least 2 of these credits beyond the introductory level. Data are also provided on the levels of occupational courses graduates completed,

including introductory, second- or higher level, and specialty courses.

Vocational education at the non-baccalaureate postsecondary level primarily focuses on providing occupationally specific preparation. Postsecondary-level occupational programs generally parallel the program areas identified at the secondary level:

Agriculture;
Business and office;
Marketing and distribution;
Health;
Home economics;

Technical education (including protective services, computers and data processing, engineering and science technologies, and communication technologies); and Trade and industry [2].

While emphasis at the postsecondary level has traditionally been providing students with skills needed to enter a particular occupational field, these skills have typically been at a more advanced level than those provided through secondary occupational programs.

Postsecondary vocational education is offered at several types of institutions, including public and private, and 4-year and less-than-4-year postsecondary institutions. This publication provides comparable information on participation in six different institutional types: public 4-year institutions; private, nonprofit 4-year institutions; public 2- to 3-year institutions (community colleges); public vocational-technical institutes; private, nonprofit less-than-4-year institutions; and private proprietary (for-profit) institutions.

As was the case at the secondary level, postsecondary occupational education is delivered in the form of courses that are organized into program areas. In a few cases, students are required to enroll formally in an occupational program. In other cases, students may be required to declare a major upon enrolling in an institution. However, students often sample courses from a variety of program areas, whether or not they have declared a major. This tendency to "mill around" in postsecondary vocational education has been well documented. Moreover, postsecondary institutions, particularly community colleges, serve a student population with diverse educational goals. Some students enter with the intention of completing a degree or certificate, while others intend only to take one or a few courses and then leave. In most cases, it is only possible to identify with accuracy vocational program participants once students have completed a program and obtained a degree or certificate. However, this captures only a portion of non baccalaureate postsecondary students.

Because of the timing of this publication, transcript data were unavailable for detailed analysis of participation patterns in postsecondary vocational education. Instead, this report relies on students' self-reported majors. Consequently, in contrast to the secondary level, the discussion of postsecondary vocational education does not provide information on varying levels of participation by students.

In the United States, vocational education is available at regional (community) colleges and junior technical colleges. According to experts, now these educational institutions are ahead of all others in terms of development. In 2013, there were about three thousand such institutions in the United States. Community

College (or Junior College, City College) is an analogue of Ukrainian colleges, schools and technical schools, i.e. an educational institution that offers secondary special education. Of course, they are much less prestigious than universities, but most often they are chosen by high school graduates. First, because they are easier to do for those whose academic performance at school was not high enough. And second, the cost of studying in community colleges is much lower than in universities where many American families cannot afford to study. The curriculum at community college is usually for two years. After graduation, the graduate is awarded the so-called associate's degree. This degree does not apply to scientists (as a master or bachelor), but confirms the completion of secondary special education. In addition to a diploma with the above degree, a student of the school can receive a Graduate Certificate - a certificate of completion. The difference between these two documents is that this certificate is not a document of completed education. As in Ukraine, a certificate of completion indicates that the course has been taken by a student. Such a document can be obtained by taking separate courses offered by the curriculum. Although the certificate does not replace a diploma, it can be very useful if the graduate wants to continue his studies and enter the university. Thus, according to statistics, about 40% of students in the United States complete two-year courses in college, and then continue their studies with 2-3 courses to obtain a bachelor's degree. This option is more economical - the cost of vocational education is many times lower than higher (on average, an academic year at the college costs six thousand dollars). The quality of vocational education in the United States meets international standards. In addition to the affordable price, colleges have a number of other advantages. This is a simplified procedure for submitting documents, and the ability to recalculate the subjects studied in case of further admission to the university, and comfortable learning conditions - small groups, cozy dormitories. The training is more applied, practical in nature, which includes various internship programs at enterprises and large companies in the region where the college is located. Thus, a graduate of a vocational school is quite ready to be hired. Junior Colleges train narrow specialists who are needed in a particular region in a particular field, so they are mostly designed for American students. There are also private primary colleges, which are designed to prepare students in technical specialties for further study at the university. Upon graduation, the graduate is awarded an Associate Degree. Private colleges of primary education have the same curricula as public and public ones, but pay relatively more attention to preparing for four year colleges in technical disciplines. Community Colleges are ideal for students because they are easier to enroll in and correspond to the first two courses of the university. Thus, a graduate of such a professional institution, having received the degree of Associate Degree, can be enrolled in the third year of university. Typically, local colleges work closely with universities and can transfer students on time. Two-year colleges have the advantage that entrants do not need to take exams and tests. It is enough to provide a high school diploma / certificate. Some colleges may require a certificate of a student's financial capacity. At the time of admission to college, the applicant must be 16 years old. Applications for admission can be left on the official websites of selected colleges. The number of students in municipal colleges is different, as a rule, one or another college reflects the culture and traditions of the district and state

in which it is located. As a rule, the academic year in municipal colleges begins in September and ends in August. Training is divided into two semesters of 15 weeks, at the end of each tests and exams. In the summer, future associates go on vacation. In order to obtain an associate's degree, it is necessary to obtain about 60 credits, which corresponds to two years of study. It will be recalled that one credit is 50 minutes of class work per week for one semester (a semester equals 15 weeks). Community college is usually taught in small groups. This indicator, by the way, characterizes good private universities. Colleges have a friendly atmosphere. Many community colleges offer campus accommodation. On the campuses of two-year colleges there are educational buildings, libraries, art centers, museums, cafeterias. Colleges often have their own college radios, shops, and malls. Laboratories are equipped in technical colleges. The technical equipment of college laboratories can make other scientific institutes pale with envy; the richness of libraries - today not only "paper" but also electronic - amazes the imagination; the organization of the educational process, as well as the life and leisure of students will meet the most demanding requirements. Community colleges have been renowned for decades for their achievements in sports: many graduates become famous athletes, and it's no coincidence. All campuses of municipal colleges have gyms, football fields, various sports grounds. Professional education in the United States is provided by specialists in such fields as engineering, data processing, drawing, office work, aviation, interior design, photography, health care, business, and food technology. About 80 percent of United States firefighters, law enforcement, and EMT (Emergency Care) workers are enrolled in municipal colleges. Most U.S. health professionals are educated in municipal colleges: for example, 60 percent of nurses in the United States have associate degrees. This is one of the most popular specialties in the US labor market. According to the recruiters, graduates of medical, law and economics colleges are currently the most popular in the US labor market.

V. COMPARATIVE ANALYSIS

1. In the United States there is no single state system of vocational education, each state has the right to determine its structure independently. In Ukraine, there is a single state system.
2. In the UK and the US there are no common curricula, programs, textbooks. In Ukraine - the only curricula, programs.
3. In American colleges there are a limited number of subjects required for study, but most students choose themselves. The diploma is issued for the total amount of passed material. While studying the subject, the student has the opportunity to choose the teacher and time of classes. There are few options, but they are there. In vocational education institutions the number of subjects is the same.
4. Control of knowledge in the US education system is carried out during the testing of students, in Ukraine this area has also been successful in recent years.
5. The grading system in the United States and the United Kingdom is usually alphabetical, according to the first five letters of the English alphabet. In Ukraine – 12 points.
6. Reforms in domestic education began in 90s with the adoption of the Law "On Education". He legitimized new concepts for us:

bachelor's, multilevel system, which has long been common in the United States and Britain.

7. Tuition in secondary vocational institutions in the UK and USA is paid, in Ukraine - free, in addition, students receive a scholarship.
8. Material and technical equipment of foreign colleges far exceeds Ukrainian ones. Despite the significant differences between the systems of vocational education in the UK, USA and Ukraine, there are common problem: insufficient general education level of graduates.
9. Besides, in Ukraine it is necessary to develop network of VEIs as in the USA and UK. Because we have only vocational technical institutions and colleges. Comparative table is the following.

Table 1: Types of VEIs in the USA, UK and Ukraine

Vocational education institutions in the USA	Vocational education institutions in the UK	Vocational education institutions in Ukraine
Junior Colleges, Community Colleges, City Colleges	Schools, colleges of sixth class, colleges of further education, colleges of higher education	Vocational technical institutions and colleges

Table 1

10. In Ukraine in comparison with the USA and the UK more students study in universities and only 16% from number of students of universities make students of VEIs. In the UK and the USA on the contrary majority students study in VEIs. Comparative table is the following:

Table 2: Number of students in VEIs and universities in the USA [13], UK [4] and Ukraine [3].

Number of students	USA	UK	Ukraine
VEIs	19,7 millions	3,27 millions	245775
Universities	15,1 millions	2,66 millions	1,4 million

VI. CONCLUSION

A distinctive feature of vocational education compared to general education - a great variety of professions and specialties, forms of training, relatively short life of educational and program documentation, as the content of vocational training is directly related to rapid change in scientific and technological progress. And there is the following pattern: for junior vocational education,

these changes occur more often than for seniors (for example, for workers who deal directly with machinery and technology, the content of work changes faster than for an engineer who deals with scientific and technical basics and methods of designing equipment and technology).

Thus, the main characteristic of the vocational education system today is the formation of accessible, open and continuously evolving training system designed to ensure a high level of qualification of citizens, which allows meeting the needs of the economy and socio-cultural sphere in qualified personnel, continuously improving their professional skills on high level. In addition, in order to make the system more effective, it is necessary to study and identify the most important features of the education systems of other countries, especially Britain and the United States.

The system of vocational education in Britain has a number of important features that play a significant role in the professional education of students. The main feature is its practical orientation. In this regard, the diploma projects of graduates of British colleges are much more complex than Ukrainian ones, because they include a powerful practical component. Theoretically, Ukrainian students know a lot, but everything studied, for the most part, remains very abstract. It seems important in the practice of Ukrainian education to review the content of standards taking into account the requirements of the employer, to take into account the principles of developing "cross-cutting" standards of primary, secondary and higher vocational education (for example, British) to modernize continuing vocational education in Ukraine. Positive experience that is suitable for the national and cultural characteristics of our country, the national character of the Ukrainians, in line with the goals and objectives facing us at this stage of development, is necessary and important to adopt. However, at the same time we do not need to give up our positive traditions that have developed and enriched over the decades. Combining fundamental theoretical knowledge in leading industries with a strong practical component could yield tremendous results in the near future and bring our country's economy to a leading position in the world.

Also the analysis allows to identify elements of progressive experience in vocational education of the United States of America and Great Britain, which can be used in the process of modernization of domestic educational legislation in the field of vocational education: its modernization in Ukraine should be aimed at attracting, quality and flexibility, the core areas of modernization should be to promote the attractiveness of vocational education, ensuring its quality in the context of building a world educational space, funding programs, ensuring economic development and social inclusion. Attractiveness of such education and training is derived from its image and coherence with academic pathways, flexible learning trajectories that enable mobility between vocational and academic education. It is necessary to ensure involvement of stakeholders in education management to provide qualifications, which meet existing labor market requirements, employment, increasing the competitiveness of the worker in the Ukrainian labor market, and, consequently, public policy should strengthen these relationships. Ensuring the quality of vocational education in Ukraine should be embodied in the use of relevant principles, increasing the level of responsibility of stakeholders for the quality of vocational education and training, constant involvement of all partners in the process of

improving its attractiveness, use of measurable indicators It is expedient to build stimulating models of its financing, which provide a mechanism for joint spending by social partners and are a direct incentive to improve the quality of relevant educational services.

REFERENCES

- [1] 1. Bondarenko V.F. Colleges of the United States: the main periods of development / V.F. Bondarenko // Scientific notes: collection of science articles of NPU named after M.P. Drahomanov (series Pedagogical and historical science). - K., 2008. - Issue 73. - P. 18 - 33.
- [2] 2. Dearing, R. Review of Qualifications for 16–19 Year Olds / R. Dearing. – Hayes, Middlx : SCAA Publications, 1996. – 223 p.
- [3] 3. Development of vocational education in the context of globalization and integration processes: a monograph / N.G. Nychkalo. - Kyiv: NPU M.P. Dragomanova Publishing House, 2014. - 125 p.
- [4] 4. Halsey A. H. Every Child in Britain. Report of the Channel 4 Commission / A. H. Halsey, N. Postlethwaite, S. J. Prais, A. Smithers, H. Steedman. – London : Channel 4 Television, 1991. – 24 p.
- [5] 5. Kalinina O. Education quality management system in US universities: dis. ... cand. econ. Sciences: 08.0014 [Electronic resource] / O. Kalinina. - Access mode: <http://luguniv.edu.ua/wp-content/uploads2015>
- [6] 6. Kudin V.O. Professional education at different stages of human activity / V.O. Kudin // Professional education in foreign countries: a comparative analysis. - K., 2002. - P. 11 - 45.
- [7] 7. Kurbatov O.P. Innovative learning technologies in training of skilled workers in the system of vocational education / O.P. Kurbatov // Problems of engineering and pedagogical education: collection. of science work / Ukr. eng.-ped. acad. - Kh., 2005. - Issue 10. - P. 163–171.
- [8] 8. Pedagogical technologies in continuing professional education / [S. O. Sysoeva, A.M. Aleksyuk, P.M. Volovik, O.I. Kulchytka, L.E. Sigaeva]; Academy of Pedagogical Sciences of Ukraine; Institute of Pedagogy and Psychology of Vocational Education; S.O. Sysoeva (ed.). –K. : VIPOL, 2001. – 502 p.
- [9] 9. Prais, S. J. Pre-Vocational Schooling in Europe Today. Report Series 1 / S. J. Prais, E. Beadle. – London : NIESR, 1991. – 197 p.
- [10] 10. Prais, S. J. Wagner K. Schooling standards in England and Germany: some summary comparisons bearing on economic performance / S. J. Prais, K. Wagner. – London : Compare, 1986, – 536 p.
- [11] 11. Radkevych V. Innovative processes in modern vocational school / V. Radkevych // Vocational and technical education: innovative experience, prospects: Scientific and methodical collection / compiler N.I. Bugay. - Vip. 1. - K., 2005. - P. 9-13.
- [12] 12. Smithers A. All Our Futures: Britain 's Education Revolution / A. Smithers // A Dispatches Report on Education – London : Channel 4 Television, 1993. – 341 p.
- [13] 13. Tarasyuk L.N. US Education / L.N. Tarasyuk, K.N. Tseikovich // Socio-political journal. - 1997 - P. 45 - 52.
- [14] 14. Theory and practice of implementation of innovative learning technologies in professional training of skilled workers: monograph / [Luzan P.G., Manko V.M., Nesterova L.V., Romanova G.M.]; Editor G.M. Romanova. - Kyiv: LLC "SPE Polygraph Service", 2014. - 216 p.
- [15] 15. Tolley, G. Putting labels on people : the qualification business / G. Tolley // RSA Journal. – No. 5363. – P. 26–97.
- [16] 16. Varlamova AI Solving the problem of quality improvement education in the United States / A.I. Varlamova // Economics of Education. - 2014. - P. 118-125.

AUTHORS

First Author – VICTOR PARZHNYTSKY, State scientific institution "Institute of Education Content Modernization", Vasylia Lypkivskogo street,36, Kyiv, Ukraine, pvv5@meta.ua , ORCID 0000-0003-0736-4694

Second Author – OLEXANDER SAVENKO, State scientific institution "Institute of Education Content Modernization", Vasylia Lypkivskogo street,36, Kyiv, Ukraine
defoss@ukr.net, ORCID 0000-0001-6079-025X

Third Author – OLGA KAITANOVSKA, State scientific institution "Institute of Education Content Modernization", Vasylia Lypkivskogo street,36, Kyiv, Ukraine
katanoo.m@gmail.com, ORCID 0000-0001-8566-6458