Innovative approaches to teaching students in the modern educational information environment in the USA and Great Britain

Інноваційні підходи до навчання студентів у сучасному освітньому інформаційному середовищі США і Великої Британії

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Abstract

The trend of development of priorities in education and training of students, secondary and higher schools in the USA and Great Britain in retrospect (XIX – early XXI centuries) is clarified. In particular, classical education is briefly described, which had a reproductive character and considered the student as a passive object of learning, which must be filled with knowledge in accordance with certain programs and methods. Classical education was represented by the following approaches: secular, theological, biographical, introspectionist, logical and methodological. American scientists noted that traditional types of Education (classical education and non-classical education) are based on the causal mechanism of the development of thought, the basis of their thinking is considered either the object of learning (classical education) or the subject of learning (non-classical education). Postnonclassical Education combines the

Анотація

З'ясовано тенденцію розвитку пріоритетів в освіті, у навчанні й вихованні учнів, студентів середньої і вищої школи США та Великої Британії в ретроспективі (XIX – початок XXI століття). Зокрема, коротко схарактеризовано класичну освіту, яка мала відтворювальний характер і розглядала учня як пасивний об'єкт навчання, який необхідно наповнити знаннями відповідно до певних програм і методик. Класична освіта була представлена підходами: світським, теологічним, біографічним, інтроспекціоністським, логіко-методологічним. Американські вчені виділяють підходи в розвитку тенденцій підготовки вчителя, що стосуються проходження педагогічної практики студентів (академічний, дослідницький, еволюційний, критичний), елективний, інформаційний, та ін. Відмічено, що традиційні типи освіти (класична освіта і некласична освіта) базується на причинно-наслідковому механізмі

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positive aspects of traditional education in a single syzygy process of educational activity, which means constant interchangeability, on the one hand, of those who study and on the other – of those who teach. The implementation of postnonclassical education is characterized by the following modern approaches: competence-based, continuous professional improvement of teachers, situational, cultural, systematic, interdisciplinary, axiological, synergetic.

Keywords: innovative approaches, information environment, higher education institutions, USA, Great Britain.

розгортання думки, основою їхнього мислення вважається або об'єкт навчання (класична освіта) або суб'єкт навчання (некласична освіта). Постнекласична освіта поєднує позитивні моменти традиційної освіти в єдиному сизигійному процесі освітньої діяльності, який означає постійні взаємозміни, з одного боку тих, хто навчається і з іншого – тих, хто навчає. Для реалізації постнекласичної освіти характерні такі сучасні підходи: компетентнісний, неперервного професійного вдосконалення вчителів, ситуаційний, культурологічний, системний, міждисциплінарний, аксіологічний, синергетичний.

Ключові слова: інноваційні підходи, інформаційне середовище, заклади вищої освіти, США, Велика Британія.

Introduction

The relevance of the study is due to the modernization of the higher education system of Ukraine, which opens up a new range of goals for its development in the context of the implementation of the Bologna agreements. Integration of Ukraine into the European community and ensuring the competitiveness of National Higher Education on the world market require constant improvement, search for effective ways to improve the quality of educational services, testing and introduction of new innovative technologies, modernization of the content of education, development of the state-public model of education management, effective approaches to the organization of scientific activities.

In the context of our research, the experience of training future specialists in the United States and Great Britain is of considerable interest. The appeal to the experience of these countries is explained by the fact that these countries are among the most developed, they focus on general trends in the development of the education system in the context of globalization, they have rich traditions in the organization of the education system, constantly improve the level of training of future specialists, providing methodological and methodical foundations with deep psychological and pedagogical support focused on the needs of practice.

Transformations taking place in higher education are due to political, social, economic, technological and other changes taking place in the world. New information technologies, new pedagogical approaches, limited material, technical and financial resources, constantly changing demographics, international competition, increasing quality requirements, the need to increase the responsibility of the subjects of the educational process, cultural diversity and other problems faced by the higher education at modern stage.

The study and analysis of modern trends and conceptual ideas for the introduction of innovative technologies in the educational process are of scientific interest, as they will help draw certain conclusions and evaluate the experience of the United States and Great Britain, which have certain successes in this field.

In the article, we considered innovative approaches to student education in the modern educational information environment of the USA and Great Britain, because the information environment in these countries is among the most advanced in the modern world both in terms of quantitative indicators (the number of students and institutions of higher education, the amount of funding in percentage and in absolute terms), as well as from the point of view of qualitative assessments (leadership of the leading universities of the USA and Great Britain in international rankings, which has already become commonplace).

The dynamism of the modern world, the increasing interdependence of its subjects, the rapid development of information and communication technologies contribute to the significant intensification of interstate dialogue,

the emergence of new forms and methods for an international audience.

The purpose of the paper, to reveal innovative approaches to teaching students in the modern educational information environment of higher education institutions in the USA and Great Britain.

Literature Review

V. Kizima (2003) analyzes a non-classical approach that considers the subject, a person, as one who is able to put himself in the center of the situation, here the leading role is played by the subject of training.

L. De Mause (1974) moved away from classical psychoanalytic philosophy, devoted himself to the history of pedagogy and founded an independent direction of childhood history, which is focused on the analysis of the history of teaching and education of children, the problem of the family and family traditions.

M. Mykhailichenko (2008) argues that the approval of the competence approach in professional education means a reorientation from the process to the result in its activity dimension.

Scientists W. Hutmacher (1997) & G. Johnes (1997) understood the competence of a specialist as structured knowledge, skills, abilities and attitudes acquired in the course of training. A similar approach is taking place in the United States (OECD, 2002).

Y. Bondaruk (2013) analyzes the approach of "Acquaintance with the profession", which takes place through the organization of training using programs to support novice teachers and the approach of "Continuous professional improvement of teachers", which puts teachers at the center of school reforms. It combines the goal of professional growth of teachers with the educational needs of students.

A. Kuzminskyi (2005) proves that in the traditional approach, the results of students' academic performance were taken as the main criteria for assessing the success of the school, and now the role of the school is determined by such systemic characteristics as the ability to create conditions for the realization of creative abilities of each member of the teaching staff.

V. Shunkov et al., (2022) light up the directions of using multimedia technologies in the training of future specialists.

Methodology

In the course of the research, theoretical methods were used: literature analysis; modeling and designing of results and achievement processes at different stages of search work; analysis of documents of educational institutions; generalization and synthesis, which made it possible to determine the purpose of the research, formulate its tasks.

The methodology of using educational information technologies as a type of pedagogical activity and the study of the essence of the methodology of using information technologies in the educational process is an important task of training students.

The construction of the methods of using information technologies as a science of a variable set of certain laws of the use of information technologies caused the need to solve the task related to the construction of a generator of these laws. The didactic design of the methodology was considered as such a generator, which allowed describing the learning processes using information technologies, researching and analyzing the available information technologies, adapting information technologies to specific psychological and pedagogical conditions, independently building and modeling them, enriching and developing the methodology of their application.

The article discusses methods of using (or applying) information technologies and various approaches in the learning process, the sequence of actions of which can be as follows:

1) a set of didactic learning goals using information technologies is determined;
2) psychological and pedagogical conditions for the use of information technologies are determined (diagnosed, specified);
3) the dominant principles of use are highlighted;
4) dominant methods of learning using ICT (methods of using information technologies) corresponding to psychological and pedagogical conditions are distinguished;
5) methodological recommendations are developed that reveal the features, advantages, and limitations of the use of information technologies in specific conditions.

The overview of new schemes, technologies and methods in education using informational educational tools opens up new opportunities and methods of providing students with social, professional skills and abilities. Information technologies make it possible to create conditions for the formation of a socially successful personality with high intelligence, creative abilities and a desire for leadership.

The formation of the methodology for the use of information technologies in education is an innovative form of presenting the educational process, based on the fuller use of knowledge, and involves the active development of information technologies based on a set of research techniques used in the scientific knowledge of the educational environment.

The methodology of using information technologies in education involves: theoretical understanding of the use of information technologies in education, development of new didactic principles, creative application of the basics of didactics under the conditions of information and educational technologies; introduction of new methodological bases of individualization and training based on the application of the balance method of designing educational programs in the conditions of information technologies, taking into account the personal characteristics of students; the formation of a new understanding of the content of the educational space in the conditions of the use of information technologies, in which it is possible to merge various traditional forms, methods, methods, techniques and means of learning (group and individual; contact and non-contact, etc.); creation of a legal framework for the functioning of a university that uses information technologies; development of a target program for the development of general and continuous education based on information and communication technologies.

Thus, methodical aspects of the use of information technologies provide an opportunity to improve the quality of education and use educational time more efficiently.

Results and Discussion

The old traditional types of education were based on variations of two priorities – the classical approach and the non-classical one. Let us show their signs. Representatives of the *classical paradigm* deduced knowledge about a person from the general, ideological and philosophical view of the world (regardless of whether it was perceived as a material substance, or as the existence of a spirit or idea), considering the person as a part of the world dependent on him. At the same time, the teacher acts as an intermediary who transmits the received system of knowledge to the student and embodies the corporate wisdom of the "classics" behind him and which he only articulates. Its individual significance is determined by the extent to which it conveys to the audience the established positions of generally recognized authorities. The knowledge system here dominates both the teacher and the student. Classical education had a reproductive character, it required the assimilation of "classical" models, was a movement from the past to the present. It considers the student as a passive object that needs to be filled with knowledge in accordance with accepted programs and techniques. Learning took place as a process of accumulating a certain amount of information, the ability to manipulate which was considered a sign of a person's education.

The non-classical approach considers the subject, a person, as one who is able to put himself in the center of the situation, here the leading role is played by the subject of learning (in the classical approach, the object of learning). In contrast to classical education with its reliance on the system of knowledge and the system of teaching as an unshakable basis, in non-classical education, a special role is played by the subjectivity of the student, the personality of the teacher, an individual approach to students, a creative attitude to the material being studied, to its selection and methods of communicating to listeners. However, non-classical education has the features of reducing the quality of its result-professionalism, replacing objective knowledge with individual opinion (Kizima, 2003).

Therefore, traditional types of education are based on the causal mechanism of the development of thought and the basis of thinking is considered either an object (classical education) or a subject (non-classical education). We briefly describe approaches to the organization of educational activities in the United States and Great Britain in a retrospective aspect, from the beginning of the XIX century to the beginning of the XXI century. The mid XIX and early XX centuries are characterized by three approaches: biographical, introspectionist, and logical-methodological.

The biographical approach to the study of historical and pedagogical reality provides for an empirical description of the biographies of

famous teachers who aim to create a socio-cultural context of historical and pedagogical reality. The main research method of the biographical approach is a biographical description, which aims to present the ideals of education that guide the people in their historical development. The English historian of pedagogy E. Quick held such methodological positions. In the work "The Reforms of Education", he actualized the problem of research on biographies of teachers of the past – E. Roterdamskyi, F. Rable, Ya. A. Komenskyi, Zh.-Zh. Russo (Sammond, 1983).

The introspectionist approach to the study of historical and pedagogical reality is characterized by the fact that according to it, the biographies and creativity of teachers were considered through the prism of individual personal experience. Later, biographical and introspectionist approaches took precedence mainly in frankogerman pedagogical historiography (Schmid, 1902).

The logical and methodological approach was a conceptual modeling of various aspects of historical and pedagogical activity based on the synthesis of theoretical foundations of various social disciplines (Philosophy, Political Science, Cultural Studies, Psychology, etc.). Such studies were characterized by a high degree of theorization, abstraction, and empirical fact was used as an explanatory component that illustrated and concretized the research position. This approach was used in various Western countries, but later it was spread mainly in Anglo-American historiography (Schmid, 1902).

In the approaches of that time, the ideas of unidirectional linearity and consistency of world history prevailed, these definitions were considered as a homogeneous, unchangeable, directed phenomenon. The period of classicism was dominated by mechanistic methodological theoretical approaches, scientific and rationalistic approaches in nature.

A special feature of the conceptual development of Western history of pedagogy is the socio-historical approach, which is expressed in a number of independent approaches of historical and pedagogical research: historical-gender, historical-political, legitimate, historical-cultural, elite, critical, etc. These approaches represent the theoretical basis for the formation of independent concepts.

Let us briefly describe these approaches.

The historical-gender approach, the emergence of which was due to the change in the role of women in western society, the growth of the political movement for gender equality. For the first time, the American scientist Lawrence Cremin noted the gender approach in 1961 in the work "The transformation of the school" (Cremin, 1961). In the 60s, the United States and Great Britain developed this approach in connection with the activation of the feminist movement. Its representatives: American researcher Professor Kathleen Weiler (Vandewalker, 1908); American scientist Professor Sheila Rowbototham (Bremner et al., 1971). In their works, they analyzed women's education using the biographical method. The purpose of the approach is to study the social and economic situation of women in society from the point of view of the historical development of pedagogical theory, gender and national identity and specifics in education, to explain changes in the school system to consider the gender development of society, to explain the importance of women in education.

Historical and legitimate approach. The founder of the legitimate approach in Western historical and pedagogical science is the American researcher Professor Richard Kluger, who emphasized the importance of the legislative framework in the history of education and argued that laws determine the development of the education system, especially in the history of European and American schools. The historical-legitimate approach is that historical and pedagogical research must meet such requirements as historiographic significance (development of knowledge on the history of society) and practical interest.

As noted by W. Urban, a significant number of scientific works of researchers meet the first requirement – the development of knowledge on the history of society based on legislative acts in order to identify and solve educational problems. (Urban,1999). Representatives of the legitimate approach are scientists of the Harvard School of the history of pedagogy James T. Patterson, Mark Tushnet and others. Scientists deal with the problems of emigration (migration from their homeland to another country); migration and acquisition of features of the American way of life, American culture; globalization in the history of US educational policy.

The historical and elitist approach to the study of the development of Education emerged in the 80s of the XX century. Its founder is considered Stanford University professor David B. Tyack.

Proponents of this approach: the president of the American Educational Research Association, Professor Larry Cuban; Elizabeth Hansot; Michael Kirst and others. According to the historical and elitist approach, scientists consider the activities of not only professors, teachers, but also politicians, economists, and figures who have made a significant contribution to the development of the education system.

The historical and political approach is characterized by the study of political aspects of the historical development of Teacher Education. A political approach to the study of pedagogy is currently being developed in the Stat History of Education Society at Stanford University, which is headed by well-known American scientists Nancy Beadie (2010) and David F. Labaree (2017). The Wisconsin Stat Historical Society at the University of Wisconsin – Madison, where studies the education of racial, gender minorities, political, religious, emigration groups, and sociological aspects of Teaching Development. In English pedagogical historiography, scientists Ian Grosvenor (2021) and Kevin Myers (2011) examines innovations in school curricula, architecture, and administrative management.

The author of the *historical and critical approach* is the famous English scientist Prof. Gary McCulloch & Crook (2008), editor-in-chief of The Routledge International Encyclopedia of Education, president of the scientific center "History of education society", who suggested a more critical attitude to the analysis of historical and pedagogical literature. Representatives of the historical-critical approach at the present stage of education development in the UK: Dr David Croo, Professor Richard Aldrich, Professor Peter Gordon, etc.; in the USA: Professor Ellen Condliffe Lagemann, etc.

American scientist, Doctor of political theory and Doctor of psychoanalysis Professor Lloyd de Mouse. He notes that the *approach of children in history*, its introduction into the history of pedagogy was a long process, the evolution of childhood from oppression to mutual understanding took a long time, but this progressive approach achieved its purpose – many American and British scientists from the 80s of the XX century introduced it into life (De Mause, 1974). Proponents of this approach: Professor Nicholas Sammond of St. Louis University of Washington (Sammond, 1983); famous American philosophers Joseph Illick and Henry Ebel supported the direction of the children in history.

As can be seen from the above, the development of briefly described approaches of scientific search (historical-gender, historical-political, historical-legitimate, and historical-critical) in the UK and the USA determines the socialization of the history of pedagogy.

American researchers distinguish such approaches in the development of teacher training in the United States in the process of passing pedagogical practices, academic, research, evolutionary, critical.

For representatives of *the academic approach*, the leading role is that of the teacher as a scientist and specialist in a particular subject. Liberal arts education, supplemented by practice at school, is considered as the only prerequisite for working as a teacher.

The research approach is an approach that contrasts with the "ready-made knowledge method" – has a significant impact on classroom practice. Representatives of the research approach build the content of teacher education based on the formation of professional competence or skill of the future teacher, for which they develop a certain list of skills and abilities.

Because of applying the research approach, promising educational technologies were developed and tested in UK schools.

The evolutionary approach is based on a combination of three types of classes: practice at school, independent work on familiarization with learning issues, seminars that serve to study the problems that arise during the course of pedagogical practices. Such pedagogical practice begins with 4 hours a week allocated for individual work with one or a group of students, and then gradually expands in content and time. At the last stage, the trainee student works only at the school and is fully responsible for the students' knowledge.

The critical approach is to criticize traditional forms of teacher education and help future teachers form their own philosophy of Education. This approach was formed in the 20-30s of the XX century.

Recently, programs based on a thematic approach have been distributed, the essential features of which are the allocation of a topic that determines the content of training courses and students' practices in school, as well as the relationship between these components.

National-centered approach is an approach in which historical and pedagogical research in the United States and Great Britain focuses on the benefit of national-specific features of the development of the historical and pedagogical process.

Elective approach. In the scientific and public environment, the problem of the ratio of elective and compulsory programs is actively discussed, which, of course, varies depending on the type of higher education institution, its belonging to the public or private sector. Compulsory courses contribute to the fundamental and systematic nature of Higher Education; elective courses provide variability and individualization of education in higher education in the United States and Great Britain.

Selective approach is an approach to obtaining higher education. It is used in the study of elective courses that specify the content of the main professional and general disciplines, especially in the senior years of the University, when the student acts as a competent quasi-specialist and an active subject of the educational process (Chychuk, 2018).

Information approach is an approach that prevailed in the 50-70 years of the XX century in the process of organizing teacher training, detailed study of new programs and textbooks was given the bulk of the time, because in a very short time it was necessary to familiarize teachers with the content of a new set of educational materials.
A converged approach is an approach in which all teachers are taught the same set of skills and behaviors that have proven to be effective. (Maan, 1978).

We agree with the opinion of M. Mykhailichenko (2008) that the focus of professional pedagogical education on students' assimilation of the system of knowledge and values that have been traditional and stable over the past decades no longer corresponds to the modern social order and global transformation in the world.

As the analysis of the experience of educational systems in many developed countries shows, one of the ways to update the content of education and training technologies, to coordinate them with modern needs, is to introduce a *competence-based approach*. According to the scientist, the approval of the competence approach in professional education means a reorientation from the process to the result in its activity dimension (Mykhailichenko, 2008).

Scientists W. Hutmacher, G. Johnes understood the competence of a specialist as structured knowledge, skills, abilities and attitudes acquired in the course of training. Researchers divide competencies into groups:

– super-subject – these are intersubjective or basic, key competencies that combine a set of knowledge, skills, and attitudes acquired during the entire period of Education;
– industry-wide, which the future teacher acquires when mastering the content of a certain program during training;
– subject competencies that a student learns in the process of studying a particular discipline while studying at a higher education institution (Hutmacher, 1997; Johnes, 1997). A similar approach is taking place in the United States (OECD, 2002).

When comparing the traditional and competency-based approaches, it is revealed that the competency-based approach is characterized by flexible requirements for each student, because of which everyone achieves a given result according to their educational pace. When using the traditional approach, the same duration of study is established for each topic, section, or training course, regardless of individual characteristics of the individual (Mykhailichenko, 2008).

Recently, the following approaches have been used in the countries whose education is analyzed: "Acquaintance with the profession", "Continuous professional improvement of teachers", "socio-psychological", "situational", "and systemic". We will briefly describe them.

The "Acquaintance with the profession" approach. Introduction to the profession and responsibilities takes place by organizing training using support programs for novice teachers. This approach, as Y. Bondaruk notes, helps young teachers to better study the educational policy of the district; understand their professional responsibilities, that is, are acquainted with the profession and responsibilities.

The "Continuous professional improvement of teachers" approach. This approach puts the schoolteacher at the center of school reforms. It combines the goal of professional growth of teachers with the educational needs of students. This approach is the main strategy for the development of modern SEC specialists around the world. At the same time, the school forms the

educational process of teachers, evaluates their professional development (Bondaruk, 2013).

Socio-psychological approach. Its supporters seek to reorient the traditional orientation of the professional development system to the needs of the teacher. In special professional development programs focused on the needs of school systems, the ideas of organization and management psychology, known under the names: industrial social psychology, organizational psychology, organizational behavior, management psychology, have become widespread. Proponents of the "Organizational Psychology" approach are experiencing difficulties in their work. In particular, some teachers participating in the "Organization development" program have a sense of anxiety, because when they evaluate others, they are also evaluated. In addition, according to the American researcher D. Maan (1978), some teachers overestimate the self-esteem of personal professional abilities.

Situational approach. To effectively achieve the purpose of organizing the training of a future schoolteacher, it is important to link specific methods of the educational process, concepts with certain specific pedagogical situations. The central point of the approach under consideration is the situation. A situation is a set of texts that reflect a specific set of conditions and circumstances that create a significant impact on the schoolteacher training system at a specific time.

Cultural approach – it allows us to consider teacher education in the United States and Great Britain, its goals, traditions, development trends as a phenomenon of American and British culture, which reflects the cultural values, traditions, mentality and special spirituality of each country. The cultural factors of these countries are the socio-cultural, political and economic conditions and national traditions according to which the British and American teacher education systems function.

The task of the cultural approach is to recreate the socio-cultural context of the historical development of pedagogical science and the education system. Recently, in all institutions of higher education in the United States, there has been a tendency to strengthen multicultural teacher training, taking into account regional characteristics.

The multiculturological approach to the quality of teacher education in the United States is characterized by cultural, ethnic, racial, and religious diversity, with each citizen functioning within his or her own ethnic group. This approach focuses on taking into account national and ethnic differences, forms models of pedagogical orientations inherent in the worldview and needs of a multiethnic society in the United States (Chychuk, 2018).

In connection with the comparative analysis of the pedagogical education systems of the USA, Great Britain and Ukraine, we also used a *comparative approach*, which allows us to critically approach domestic problems in the field of education. It helps to identify changes in the field of ensuring the quality of Education; promotes the introduction of various pedagogical innovations, better disclosure of the ratio of global and national; expands our understanding of the contribution of each country to the development of the international educational space.

When clarifying the role of cultural and comparative approaches in the implementation of a comparative analysis of the pedagogical education systems of the analyzed countries, we adhered to *the principle of unity of global and national in the development of education systems*. Because with such a statement of the problem, it was necessary to identify global trends and at the same time it was impossible to do without establishing a national identity in the field of education in Ukraine.

The axiological approach allows us to identify value orientations in the system of teacher education in the USA and Great Britain.

A systematic approach has given the UK and US teacher education systems integrity. The systematic approach is an ordered set of goals, content, forms and methods of interaction between subjects of pedagogical education; it provided the basis for integrating pedagogical concepts.

Teachers in the UK and the USA consider the school as an integral social organism, which is characterized by the interrelation of all its components in the dynamics of development. If in the traditional approach, the results of students' academic performance were taken as the main criteria for assessing the success of the school, now the role of the school is determined by such systemic characteristics as the ability to create conditions for the realization of creative abilities of each member of the teaching staff (Kuzminskyi, 2005).

Therefore, when implementing a systematic approach, it is necessary to adhere to the principle of integrity, which forms an organic unity of all elements in the system of Teacher Education.

Interdisciplinary approach. The release of highly qualified specialists in the period of high rates of scientific and technical development contributed to the introduction of special training programs based on the interdisciplinary principle of training, which was based on interdisciplinary knowledge. The essence of the interdisciplinary approach to personnel training is to introduce humanities disciplines to technical institutions of higher education, and technical and natural sciences disciplines to humanitarian institutions. The interdisciplinary approach to learning was aimed at educating students of broad views, unconventional thinking, and the ability to solve common problems that arise at the intersection of different industries. The coming century, says V. Budanov, is a century of interdisciplinary research, the methodology of which is horizontal, which, in contrast to the vertical cause-and-effect relationship of disciplinary methodology, carries a colossal heuristic charge (Budanov, 2003).

A synergistic approach. In the modern world, education is one of the dominant factors in the life of a person and society. The education system needs to focus on a new strategy, on a new methodology of thinking and cognition, due to the fact of the existence of an open, nonlinear, changing world and the need for appropriate training and education of a person. According to V. Andrushchenko, from today's positions, synergetic can be considered as a new interdisciplinary movement in modern science, which marks the formation of a new view of the world and a person in this world (Andrushchenko, 2014).

Synergetic is an interdisciplinary scientific field that studies the mechanisms of evolution and chaos management. Thanks to synergetic, a different side of the world opens up, characterized by principles:

– *instability* – these are states of instability (bifurcation points that are in situations of the emergence of a new quality and characterize the boundary between the new and the old);
– *nonlinearity* is a violation of the superposition principle: the result of the sum of actions is not equal to the sum of results. This is also due to the fact that in such systems the number of connections between

elements increases faster than the number of elements;
– *non-closure* (openness) – characterized by the fact that all living organisms and society are open systems, because they consume matter, energy, information, and their entropy (a measure of chaos) can decrease. The openness of such systems allows them to evolve from simple to complex, from an embryo cell to a complex organism. Closed systems are characterized by an increase in entropy, they cannot become more ordered, but can only move towards an increase in chaos;
– *hierarchy* – the passage of bifurcation points by the system represents the birth or death of levels – a new quality of the system arises horizontally (steam-liquid-ice) (Budanov, 2003).

V. Andrushchenko (2014) considers synergetic as a new interdisciplinary movement in modern science. V. Lutai (2008) considers synergetic to be a synergistic paradigm, the core of modern post-non-classical science as a theory of self-organization of complex open systems.

Synergetic takes on the character of an interdisciplinary paradigm in modern science to solve the most acute problems of our time, for example, the qualitative renewal of Education, which requires the conceptual development of a synergistic approach, and recommendations for the implementation of its achievements in the reform of the educational sphere (Andrushchenko, 2014).

Modular approach allows you to rethink the meaning of disciplines, as well as their interaction within the module and modules within the block (cycle), because integrated interdisciplinary connections ensure the logic of the educational process and represent a necessary condition for creating a single subject-problem field. Differentiation of content is provided by the optional selection of special modules for courses of narrow specialization. The modular approach to structuring the content of training at the teachers' PC allows by integrating individual parts of academic subjects (which were previously independent) into a single whole to form teachers' key socio-political, information-search, communicative, interpersonal competencies (Kuzminskyi, 2005).

Conclusions

The trend of development of priorities in education, training and education of students,

secondary and higher schools in the USA and Great Britain in retrospect (early XIX – early XXI centuries) is clarified.

In particular, classical education is briefly described, which had a reproductive character and considered the student as a passive object of learning, which must be filled with knowledge in accordance with certain programs and methods. Classical education was represented by the following approaches: secular, theological, biographical, introspectionist, logical and methodological. These approaches, mainly mechanistic and theoretical, were scientific and rationalistic in nature, and they were dominated by ideas of linearity and consistency of world history. Learning goes from the past to the present.

Non-classical education (the period from the middle of the XX century), in which the movement takes place mainly from the future to the present and in which a significant role is played by the subjectivity of the student, the teacher's personality, creative attitude to the material being studied. Individual approach to students is characterized by the formation of new approaches in the development of historical and pedagogical knowledge, which depends on socio-economic conditions in the United States and Great Britain: gender, legitimate, elitist, historical and political, critical, childhood history. The development of these approaches is determined by the socialization of the history of pedagogy. American Scientists also distinguish approaches to the development of teacher training trends related to students' pedagogical practice (academic, research, evolutionary, critical), elective, informational, etc.

It should be noted that traditional types of Education (classical education and non-classical education) are based on the causal mechanism of the development of thought, the basis of their thinking is considered either the object of learning (classical education) or the subject of learning (non-classical education). Postnonclassical Education combines the positive aspects of traditional education in a single syzygy process of educational activity, which means constant interchangeability, on the one hand, of those who study and on the other – of those who teach. The post-non-classical methodology takes into account that it is not the world and not man that exist by themselves, but their integrity, which is now becoming the main object of attention, taking into account the current realities (environmental disasters, conflicts, etc.). The implementation of post-non-

classical education is characterized by the following modern approaches: competence-based, continuous professional improvement of teachers, situational, cultural, systematic, interdisciplinary, axiological, and synergetic.

Many approaches influence the construction of professional training courses for future American teachers. This is because the education system in the United States and Great Britain is based on pluralism. These are the following approaches: behaviorism, cognitivism, humanism, constructivism, etc.

Many of the teachers of American higher education institutions believe that it is advisable for students to present a variety of approaches. In addition, students, after being acquainted with them, develop their own teaching philosophy, and only then is it considered that future teachers could enter pedagogical practices.

The integration of the presented approaches brings education to a new level, in the center of which is a person, his development and self-realization, which allows us to determine the human-centrist orientation of pedagogical education.

We see prospects for further research in substantiating trends in the development of priorities in education.

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