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The second issue contains articles by scientists from different countries, prepared on the basis of their scientific work. It is designed for university teachers, graduate students, undergraduates, practitioners in pedagogy and education management.

CONTENTS

CHAPTER 1
GENERAL PEDAGOGY AND HISTORY OF PEDAGOGY

SCIENTIFIC AND PEDAGOGICAL IDEAS OF VASYL SUKHOMLYNSKYI AND UKRAINIZATION: AREAS OF INTERSECTION

Natalia Syvachuk[1], Oksana Tsyhanok[2], Oleksandr Sanivskyi[3]

[1]Dr.Sc., Professor, Professor of pedagogical sciences of the department of Ukrainian literature, Ukrainian studies and methods of teaching, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: n.p.syvachuk@udpu.edu.ua, ORCID: https://orcid.org/0000-0002-1279-5424

[2]Ph.D. (Pedagogical Sciences), Associate professor, Associate professor of Pedagogical Sciences of the Department of Ukrainia Literature, Ukrainian Studies and Methods of Teaching, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: ksana-vania@ukr.net, ORCID: https://orcid.org/0000-0003-0898-6882

[3]Ph.D. (Pedagogical Sciences), Associate professor, Associate professor of the Department of Ukrainian Literature, Ukrainian Studies and Methods of Teaching, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: san4elo45800@ukr.net, ORCID: https://orcid.org/0000-0002-9312-9369

Abstract. *The article describes the periodization of the pedagogical activity of V. Sukhomlynskyi, which is based on published and archival sources in the Ukrainian studies dimension and the leading factors in the formation of the personality of a well-known teacher are clarified. Special attention is given (paid) to the scientific-pedagogical concept developed by V. Sukhomlynskyi, which counteracted the efforts of the communist-imperial state apparatus, aimed at the assimilation of the Ukrainian people, at erasing its inherent national features. Pedagogical activity of Vasyl Oleksandrovych was aimed at exalting the Ukrainian nation, forming patriotism; he wanted that every teenager gradually develops a personal attitude towards the Motherland: a desire, a spiritual urge to confirm its dignity, greatness, honour, glory, and power. An analysis of V. Sukhomlynskyi's creative heritage proves that the formation of his pedagogical views began in 1945–1948. Despite the fact that V. Sukhomlynskyi was educated and brought up under the conditions of a totalitarian regime aimed at Russification, he managed to remain a true patriot, a Ukrainian intellectual who cheered for his native people. The pedagogical heritage of V. Sukhomlynskyi must be considered in the context of the historical period when his formation took place as a teacher and scientist. Simultaneously with the spread of Ukrainization of education, the issue of providing teaching staff for newly created Ukrainian schools became acute. In particular, in 1923, the shortage of national teaching staff was catastrophic – with a need for 100,000 teachers, there were actually 45,000, a significant percentage of whom had a low level of pedagogical and general education. It should be noted that during the early period of Soviet history (1921–1926), the intellectual atmosphere of society was quite free. The national idea was not rejected, but only combined with the idea of internationalism.*

Keywords: *Vasyl Oleksandrovych Sukhomlynskyi, pedagogy of V. Sukhomlynskyi, Ukrainian studies dimension of V. Sukhomlynskyi's pedagogy, Ukrainianization, the historical period, the Motherland, internationalis.*

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Introduction. The specificity of historical-pedagogical research is revealed in the combination of its internal logic and principles. The implementation of this work is possible only under the condition of using the principle of historicism in accordance with the features of the personalistic direction of historical and pedagogical research, which will make it possible to reveal and interpret the regular connections between the externally dispersed facts and phenomena of the educational

experience of our people, as well as predict the use of that knowledge that can to serve in the conditions of the revival of national consciousness and spirituality and to explore the pedagogical theories of "the great humanist of the age, the national national pedagogue" V. Sukhomlynskyi [9, p. 22].

Literature Review. Adherence to the principle of historicism ensures: 1) the objectivity of the study of the ideas of Ukrainian folk pedagogy in the creative heritage of V. Sukhomlynskyi; 2) carrying out a systematic analysis, a balanced assessment of socio-economic and political factors that affected the formation of the teacher's personality, allow to comprehensively understand the specifics of the chosen era; 3) establishing the time sequence of the stages of educational activity of V. Sukhomlynskyi, taking into account the specifics of each of them, the peculiarities of internal trends and contradictions in connection with other historical phenomena and facts; 4) adequate disclosure of the ideas of Ukrainian folk pedagogy in the creative heritage of V. Sukhomlynskyi, taking into account their evolution, the dynamics of changes within a certain historical period.

Aims. The observation of pedagogical activity of V. Sukhomlynsky. The analysis of the formation of Ukrainian pedagogical thought and Ukrainian studies as a science.

Methodology. In the methodology, there are different approaches. As O. Danilyan and V. Taranenko stated, that "the historical method involves consideration of the objective process of development of the object of its real history with all its twists and turns. This is a certain way of reproducing in thinking the historical process in its chronological sequence and specificity" [4, p. 294]. That is, the historical method of scientific knowledge is used only where the history of the object becomes the subject of research in one way or another [3].

The logical method is a reflection of the historical process in an abstract and theoretically consistent form. That is, the logical is, in its essence, also historical, but freed from coincidences, details, and zigzags. Historical and logical methods of research are the same, because with their help, one and the same object is studied, the genesis of its emergence and development [4, p. 294].

Results. According to O. Klymeniuk, the use of the principle of historicism in historical-pedagogical research will allow "to select positive experience in solving certain social problems "..."; to avoid repeating the mistakes that existed in the previous social practice; to develop an algorithmic system of measures for making progressive decisions in specific situations of the development of any society; correctly understand the previous stages of the development of society; objectively assess its present and most reliably predict the future" [8, p. 63–64].

The analysis of the works shows following periods of teacher formation:

I. 1918–1933 – the formation of the personality of V. Sukhomlynskyi during the period of the beginning of Soviet "Ukrainization", the stormy period of the national and political restoration of Ukraine and the corresponding outbreak of ethnologization of humanitarian science. At that time, Ukrainian studies acquired the characteristics of ethnological science;

II. 1934–1947 – the estamblishment of the teacher's personality and the beginning of his professional activity;

III. 1948-1960 – the establishment of V. Sukhomlynskyi as a teacher-scientist: defense of a candidate's thesis (1955), awarding the title of corresponding member of the Academy of Pedagogical Sciences of the RSFSR (1957), awarding the title "Honored Teacher of the Ukrainian SSR" (1958) – the period of ideological ("Khrushchev") thaw – caused a new surge in the development of Ukrainian studies;

IV. 1961-1970 – discovery of the talent of an innovative teacher, researcher, publicist, children's writer. Awarded the title "Hero of Socialist Labor" (1968), elected a corresponding member of the Academy of Pedagogical Sciences of the USSR (1968); stagnation in social life, which led to a significant detachment of Ukrainian studies from life and its tendency to artificial theorizing.

Thus, studying at school – the first period of the formation of the personality of V. Sukhomlynskyi – falls on the period of the so-called Soviet "Ukrainization" (1926–1933).

Actually, "Ukrainization" began with the resolution of the Plenum of the Central Committee of the RCP (b) "On Soviet Power in Ukraine" dated November 29, 1919, which gave a certain stimulus to national and cultural revival [5, p. 56].

In the 1920 resolution "On the Introduction of the Ukrainian Language in Schools and Soviet Institutions" it was noted that "the Ukrainian language, as the language of the majority of the population of Ukraine, and the Russian language, as the common language of the Union, have national importance in the Ukrainian SSR, and they must be taught in all schools – educational institutions of the Ukrainian Soviet Socialist Republic. The People's Commissariat of Education entrusted the teaching of academic subjects in educational institutions to local councils of worker-peasant and Red Army deputies" [15].

In 1923, the decree of the Russian Communist Party (Bolsheviks) started the Ukrainization of school, educational and cultural institutions, and the decision of the Central Executive Committee and the Council of People's Commissars of Ukraine dated August 1, 1923 – the Ukrainization of the state apparatus.

The decree "On Measures in the Matter of Ukrainization" (July 27, 1923) decreed "to complete the translation of social education institutions into the Ukrainian language within the next 2 years" [15]. The policy of Ukrainization consisted in mastering the Ukrainian language, knowledge of Ukrainian history and culture. There was a need to spread the Ukrainian language in the country, given the actual superiority of the Russian language.

The nationally conscious intelligentsia, educators gladly welcomed this policy, had high hopes for it, in particular, M. Hrushevsky wrote in a letter to V. Kuziv: "I attach more importance to the moral and cultural education of our people than to the political issue" [1, p. 281].

Discussion. Problems of Ukrainization were regularly discussed at Politburo meetings. During 1923–1925, the Central Committee of the CP(b)U issued several decrees, orders, and instructions regarding Ukrainization, which took place under administrative pressure and within the framework of strict ideological restrictions

with threats of dismissal.Instead, the General Secretary of the Central Committee of the CP(b)U L. Kaganovych did everything to empty the content of Ukrainization, direct it into the ideological sphere, demoralize the bearers of culture, and limit their creative freedom. In contrast to him, appointed in 1924 to the post of People's Commissar of Education of the Republic, O. Shumsky sought to spread Ukrainization in the realm of education, culture, and science.

According to Ya. Dashkevych, "the flourishing of social and cultural life ... was not the result of the national policy of the party, known as Ukrainization... The social and cultural flourishing was not a consequence of Ukrainization, but on the contrary – the pressure of the Ukrainian national element on the party was so strong that it was forced was to go for national reform under the disorienting name of Ukrainianization" [6, p. 79].

The intellectuals of that time positively perceived the shift in the national policy of the CP(b)U. In particular, V. Vernadskyi wrote: "Ukraine, it seems to me, has now strengthened nationally, and the communists there are forced to reckon with the national movement more than in Russia" [2, p. 220].

From February 1927, M. Skrypnyk became People's Commissar of Education of the Ukrainian SSR, who continued O. Shumskyi's work on the Ukrainization of education. However, in the same 1927, the first devastating blow to Ukrainization was dealt – on July 6, the resolution "On ensuring the equality of languages and promoting the development of Ukrainian culture" was adopted. This resolution canceled all previous legislative orders on Ukrainization.

The beginning of the attack on Ukrainization was two articles by N.Kaganovych published in the "Banner of Marxism" (No. 1, No. 3 for 1930) – "Against "populism" in linguistics (Where is the Ukrainian literary language going)" and "A few words about dictionaries".

At the 11th Congress of the CP(b)U, which took place in June 1930, the directions of future devastating attacks on Ukrainization were determined. Repressions against its active supporters began in the fall of 1930. The opinion of O. Kucheruk is correct that Ukrainization in Ukraine, initiated by the Bolsheviks, was aimed at identifying nationally conscious people in order to destroy them [10, p. 29]. During 1930-1933, many pedagogues, teachers, especially teachers of Ukrainian studies, were repressed. At the end of the 30s of the XX century entire branches of science – sociology, statistics, pedology, ethnography, demography, regional studies – which were declared "bourgeois-nationalist", stopped their development.

An increase in the level of economic life was observed (thanks to NEP) and the confidence of the Ukrainian people in their own strength appeared, a sense of personal and national dignity was revived [11, p. 167].

The memories of O. Ogloblin deserve attention: "The creative union of national and cultural interests and aspirations was characteristic of Ukrainian professorships, especially young ones, and students of the 1920s. We, the professors of the Kyiv Institute of International Studies at that time, were also very young in age, many of us were not much different from our students...We were united by an even greater goal and love for science, an ardent desire for scientific truth. And most of all, deeply and

intimately, we were united by common national and cultural, and sometimes political interests, thoughts, dreams and aspirations - the consciousness and feeling of our national duty to Ukraine and the Ukrainian people. We did not yet have the "fear complex" that was massively instilled by the Soviet authorities in the 1930s" [13, p. 224].

The second period of the formation of the personality of a teacher - admission to preparatory courses at the Kremenchug Medical College, transition to study at a pedagogical institute, study at the language and literature faculty of the same educational institution, moving and completing studies at the Poltava Pedagogical Institute. The beginning of Vasyl Oleksandrovych's professional activity coincides with the period of repression against the nationally conscious intelligentsia. A new, Soviet system of education and upbringing is being implemented in schools, which aims to emasculate the entire nation. In the work "The Way to the Heart of a Child", which saw the light of day in 1963, the teacher recalls how he "with tears in his eyes" convinced his colleagues who accused him of having too close a relationship with the students whom the young teacher was teaching to cut pipes and play them, and he conducted the classes under the open sky [21, p. 4].

It should be stated that neither the anti-Ukrainian policy of the Soviet state nor the "fear complex" prevented the young teacher from passing all the subjects for the third and fourth courses, state exams, and in 1938 receiving a diploma of graduation from a higher educational educational institution within three months. And his work "Realistic representation of the post-reformed village in the works of Panas Myrny" was rated the highest.

About the years of study at the university, V. Sukhomlynskyi recalled: "I was lucky enough to study at the Poltava Pedagogical Institute for two years ... I say it was lucky, because we, twenty-year-old young men and women, were surrounded at the Poltava Pedagogical Institute by an atmosphere of creative thinking, curiosity, thirst for knowledge" [7].

From 1938 to 1941, Vasyl Oleksandrovych worked at the Onufriiv secondary school as a teacher of Ukrainian literature, and after some time – as the head of the school's educational department. With the beginning of the war, in July 1941, he was drafted into the army. After completing short-term military and political courses in Moscow, he went to the front with the rank of junior political engineer. After being wounded in February 1942 and receiving long-term treatment, he was appointed to the position of director of a secondary school and teacher of Russian language and literature in the village of Uva, Udmurt ASSR.

The third period of formation of V. Sukhomlynskyi as a teacher began in 1944, when he, together with his wife, returned to Ukraine, to the Onufriivsky district of the Kirovohrad region, where for four years he worked as the head of the district department of public education and a school teacher. In 1945, the publishing house "Udarna pratsia" published his first scientific article – "Before the new academic year".

Vasyl Oleksandrovych already had a clear idea of the direction of his activity when he was asked to be appointed the director of the Pavlyshka secondary school:

1) organization of work in a team (meaning pedagogical, parental and student);

2) ensuring a high level of knowledge of schoolchildren, their depth and comprehension;

3) organization of educational work at school:

- ensuring a high level of knowledge of schoolchildren, their depth and comprehension;
- organization of educational work at school:
- education of patriotism;
- education of respect for work;
- education of respect for parents;
- moral education.

It is worth emphasizing that the 1950s and 1960s. – the period of the so-called "Khrushchev thaw", when de-Stalinization and liberalization of society took place, but it was during this period that the state policy of Russification and active falsification of history intensified. At the same time, the teacher at the Pavlyshka school implemented the idea of national-patriotic education of the youth, improved the methodology of studying the Ukrainian language. Thus, in the article "Notes of a History Teacher" Vasyl Oleksandrovych recalls: "The historical circle and the historical lecture, organized in our school, played a significant role in deepening the students' knowledge. On the territory of our district there are places where the battle of Bohdan Khmelnytskyi with the Poles took place. Remains of a gunpowder factory where gunpowder for the Zaporozhian army was made in 1640–1650 have been preserved. Members of the historical group conducted a tour of these places. Students made notes and sketches on the spot" [17].

As for language education, the teacher considered it necessary to focus on creating a system of oral and written exercises, on the formation of logical and stylistic literacy of students, emphasizing that a special section has been included in the work plan of the school team – "the struggle for the culture of students' oral answers and the culture of their written speech" [16].

In 1955, Vasyl Oleksandrovych defended his candidate's thesis on the topic "The director of the school is the head of the educational process."

The results of his work are reflected in the books published in the 1950s and 1960s: "Education of collectivism among schoolchildren" (1956); "Labor education in a rural school" (1957); "Pedagogical team of the secondary school" (1958); "Education of love and willingness to work in students" (1959); "Education of the communist attitude to work" (1959); "Education of Soviet patriotism among schoolchildren" (1959); "School director's work system" (1959); "Believe in a Man" (1960); "How we raised a brave generation" (1960).

The fourth period of formation of V. Sukhomlynskyi as a teacher is the 70s of the XX century. It was during this period that his talent as a teacher-innovator, researcher, publicist, and writer manifested itself.

During 1961–1970, they saw the world of work "Education of moral incentives for work in the younger generation" (1961); "Spiritual world of a schoolboy" (1961); "Formation of communist convictions of the young generation" (1961); "A person is

unique" (1962); "Work and Moral Education" (1962); "Thought about man" (1963); "Moral ideal of the young generation" (1963); "The Way to the Child's Heart" (1963); "Personality Education in the Soviet School" (1965); "So that the Motherland lived in the heart" (1965); "Moral Precepts of Childhood and Youth" (1966); "Difficult Fates" (1967); "Pavlyshskaya secondary school" (1969); "I give my heart to children" (1969); "Birth of a Citizen" (1970).

V. Sukhomlynskyi summarized his work experience, education and upbringing system in the works "Pavliska Secondary School" and "Conversations with the Young Director", in which he sought to talk about "the efforts of the teaching staff in raising a comprehensively developed person, ... to explain the methods used , ... to reveal their internal connections and interconnections" [19, p. 7], to give advice and recommendations on specific problems of the educational process and its management, which are based "on many years of personal experience... and on the data of modern science and the generalization of the experience of the best school leaders in the country" [20, p. 393].

V. Sukhomlynskyi built his pedagogical system of work at the school as a unity of a team of teachers, parents, and students to achieve the goal of providing aesthetic, labor, physical, moral, and intellectual education.

In the 1960s and 1970s Russification policy intensified in the national republics of the USSR. Thus, in 1967, Russian-language scientific journals and periodicals published in the Ukrainian SSR already outnumbered Ukrainian-language ones (respectively, 197 of the former were published, 126 of the latter). Instructions came from Moscow regarding the declaration of the Russian language as the second native language of the non-Russian peoples of the state.

This thesis was first announced by M. Khrushchev at the XXII Congress of the CPSU in 1961: "One cannot fail to note the growing desire of non-Russian peoples to master the Russian language, which has actually become a second native language for the peoples of the USSR, a means of their international communication, the involvement of every nation and nationalities to the cultural achievements of all peoples of the USSR and to world culture. The process of voluntary learning of the Russian language, which occurs in life, has a positive meaning for the development of international cooperation" [12].

In 1962, the program "Regularities of the development of national languages in connection with the development of socialist nations" was published in the journal "Linguistic Issues". On its basis, the languages of the peoples of the USSR were divided into promising and non-promising ones. The Ukrainian language was included among the latter. The refusal to learn the native language in schools was promoted and approved.

On the other hand, at the Pavlyshka school, V. Sukhomlynsky emphasized the mastery of the native language and the literary education of students, which was based on the works of classical Ukrainian literature, as well as oral folk art. The teacher wrote: "I remember with great warmth the Poltava Pedagogical Institute that I graduated from, the teachers of pedagogy, literature, and history. Here, pedagogy was not dry conclusions, but a living, vivid story about the art of education, about

methods of influencing consciousness and feelings. Here I was taught to love the word. I will never forget how we wrote works at the institute about the evening heat and the January blizzard..." [19, p. 32].

When starting work, Vasyl Oleksandrovych had a clear system of education, which was based on "the ability to read, understand, feel the primary source" [19, p. 45]. This concerned not only students, but also teachers and parents. The teacher believed that "the crucial condition for success in teaching literature in our school is considered to be love for words, a sense of the beauty of words. The entire team constantly strives to improve the level of its language culture. Illiteracy, indistinctness of speech, inaccuracy are equated with ignorance" [19, p. 45].

He treated the literature lesson as a means of forming a worldview. "Having awakened in the student's heart a feeling of admiration for the ideal of goodness, honor, truth, beauty, a feeling of hatred for evil, injustice, ugliness, the teacher of literature ensures that each student independently reads works of art, thinks about social, moral, aesthetic problems, about the future of his people and their personal future. The works, which by their ideological and artistic value are teachers of life, become the table book of young men and women" [19, p. 225].

Equally important was the students' mastery of their native language, which, according to the teacher, determined the richness and breadth of an individual's intellectual and aesthetic interests [14]. Teachers actively worked on increasing the vocabulary of school students, starting from the first year of study. For this purpose, personal spelling dictionaries, literary diaries were created, exercises were performed, lessons were held in the bosom of nature, which were called a journey to the source of thought, etc. [14].

The teacher emphasized that the ability to speak correctly is a whole branch of educational work on which the spiritual life of the entire school team depends [19, p. 45–231]. He considered understanding the emotional nuances of the native word to be the beginning of arts, and the ability to read – the basis of a full-fledged intellectual life and the spiritual need of students.

So, in the native language, the thoughts and aspirations of the people expressed by it, in the treasures of Ukrainian and world literature, V. Sukhomlynskyi saw the powerful educational power of the mother and father tongue.

Knowing the idea of the Motherland, experiencing feelings of love, gratitude, admiration, anxiety, concern for its present and future, intransigence towards its enemies and readiness to give one's life for it (an honest, noble, free life is impossible without giving one's whole self to the Motherland), a person in during adolescence, he gets to know himself, asserts his dignity" [18, p. 467].

Conclusion. Accordingly, we can conclude that the years of study of V. Sukhomlynskyi were spent among nationally conscious teachers who sought to instill the best qualities in their students – love for Ukraine, for their native land, culture, history, etc.

Thus, the scientific-pedagogical concept developed by V. Sukhomlynskyi, in our opinion, counteracted the efforts of the communist-imperial state apparatus, aimed at the assimilation of the Ukrainian people, at erasing its inherent national

characteristics. His bold statements about his native Motherland, language, human morality, and spiritual values alarmed "Great Russian" teachers, who subjected them to merciless criticism and condemned the humanitarian system of education implemented in the Pavlyshka school as opposed to the Soviet system of education.

It is worth emphasizing that Vasyl Oleksandrovych struggled with the formal, in particular, formal-grammatical approach to teaching the native language at school, and especially in its elementary level, where such an approach is very harmful. With this, he continued the work started in the 50s, ahead of time, ingeniously predicting systemic, personal-activity, axiological, cultural approaches to the education of secondary school students, which are already mentioned in modern psychological and pedagogical research.

Author contributions. The authors contributed equally.

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CHAPTER 2
INNOVATIONS IN THE MANAGEMENT OF EDUCATIONAL INSTITUTIONS

OVERVIEW OF THE METHODOLOGY OF UNIVERSITIES` INTERNATIONAL RANKINGS FOR MEETING THE CHALLENGES OF OPEN SCIENCE

Iryna Mihus[1]

[1]*Doctor of Science (Economics), Professor, Scientific Center of Innovative Researches, Tallinn, Estonia, e-mail: irynamihus@gmail.com, ORCID: https://orcid.org/0000-0001-6939-9097*

Abstract. *International rankings directly affect the development of universities around the world, especially in the context of Open Science.The purpose of the article is a comparative analysis of the methodology for calculating the main international university rankings and establishing the readiness of their transformation to meet the requirements of open science. The methodological basis of the study was the methodology of the main international universities presented on their websites. The article analyzes the methodologies of the main international university rankings and highlights the main criteria by which the rankings are calculated. According to the results of the conducted research, the main sources of information necessary for determining international ratings were systematized, namely: Information from official sources external to the university, which is publicly available; Results of a survey of the academic community; University survey results; Student survey results; The results of the survey of employers; Information from the university website; Information on scientific profiles of the university; Information on scientific profiles of university employees; Information from the websites of scientific journals; Information from university repositories. The main features that universities should take into account in order to achieve higher positions in international rankings, which will become possible if they comply with the requirements of Plan S regarding Open Science, have been clarified.*

Keywords: *Open Science; Plan S; methodology; international university rankings.*

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Introduction. In the world of globalized higher education, international rankings of universities are becoming more and more relevant every year. First, they guide applicants in choosing a place of study. Secondly, for universities, such ratings are an opportunity to attract the attention of applicants, foreign students, the best teachers and researchers, grant funds and investments due to high positions in the rating or the very fact of being included in the rating.

For more than ten years, we have analyzed the methodologies of the most popular international ratings, as well as their potential impact.

Rating methodologies include, in the vast majority, indicators related to the results of scientific research.

In 2023, the Scientific Center of Innovative Researches became a support organization for the "More Than Our Rank" initiative promoted by the International Network of Research Management Societies (INORMS). We believe that the

positions of universities cannot be based only on the results of the publishing activity of its researchers but should also include other indicators of the quality of education [1].

We believe that one of the components of ratings should analyze the results of universities' participation in open science projects, such as publishing articles in open access journals, holding conferences and publishing monographs using open access platforms, as well as organizing the process of reviewing materials using them.

Literature review. Before examining the international rankings of universities, it should be noted that on May 18-20, 2006, the conference "Methodology and quality standards of university rankings" [2], organized by the International Expert Group on Ranking (IREG) [3] was held in Berlin (Germany). The result of the conference was a kind of "constitution" for the development and application of university rankings around the world, the "Berlin Principles of Ranking of Higher Education Institutions" [4].

The founders of this "constitution" were the Center for the Development of Higher Education (CHE) (Germany) [4], the Institute for Higher Education Policy (USA) [5], the UNESCO-CEPES Center (Bucharest, Romania) [6] and other authoritative institutions from 19 countries the world [7].

To determine these ratings, the reliability of the data used, the possibility of their verification and confirmation, considering the specifics of universities of various types, as well as the peculiarities of the higher education system of each country, are important. Another important requirement for the formation of the rating is the publication of a clear and accessible methodology for its compilation. This level of openness is primarily necessary for clarity, in which way and which indicators were considered, what weight they had, and from which sources the information was obtained.

We believe that one of the components of ratings should analyze the results of universities' participation in open science projects, such as publishing articles in open access journals, holding conferences and publishing monographs using open access platforms, as well as organizing the process of reviewing materials using them.

Aims. The purpose of the article is a comparative analysis of the methodology for calculating the main international rankings of universities and establishing the readiness of their transformation to meet the requirements of open science.

Methodology. The methodological basis of the study was the methodology of the main international universities presented on their websites.

We will analyze the main international rankings of the university, which are the most popular in Ukraine and the world.

1. Shanghai ranking - The Academic Ranking of World Universities (ARWU) [8]. The academic ranking of world universities was created with the aim of evaluating the effectiveness of state programs to stimulate scientific activity in Chinese universities, in particular Shanghai University Jiao Tong, the founder of the ranking.

That is why the indicator indicates to a greater extent the scientific activity of universities.

Universities are ranked by several academic or research performance indicators, including alumni and staff winning Nobel Prizes and Fields Medals, highly cited researchers, papers published in Nature and Science, papers indexed in major citation indices, and the per capita academic performance of an institution. For each indicator, the highest scoring institution is assigned a score of 100, and other institutions are calculated as a percentage of the top score. The data distribution for each indicator is examined for any significant distorting effect; standard statistical techniques are used to adjust the indicator if necessary. Scores for each indicator are weighted as shown below to arrive at a final overall score for an institution. The highest scoring institution is assigned a score of 100, and other institutions are calculated as a percentage of the top score.

The evaluation criteria of the Shanghai Ranking's Academic Ranking of World Universities are presented in Table 1.

Table 1. The evaluation criteria of the Shanghai Ranking's Academic Ranking of World Universities

Criteria	Indicator	Weight
Quality of Education	Alumni of an institution winning Nobel Prizes and Fields Medals	10%
Quality of Faculty	Staff of an institution winning Nobel Prizes and Fields Medals	20%
	Highly Cited Researchers	20%
Research Output	Papers published in Nature and Science	20%
	Papers indexed in Science Citation Index-Expanded and Social Science Citation Index	20%
Per Capita Performance	Per capita academic performance of an institution	10%

Sources: [8]

2. Webometrics Internet presence rating. Ranking Web started in 2004 (current is the 20th year of publication) with the aim of offer full coverage of universities whatever the country or discipline involve. Currently we ranked 31 000 HEIs from more than 200 countries [9].

The Ranking Web or Webometrics is the largest academic ranking of Higher Education Institutions offering every six months an independent, objective, free, open scientific exercise for providing reliable, multidimensional, updated and useful information about the performance of universities from all over the world.

Published figures are RANKS (lower is better), intended for showing individual performances, but they are not the values used in the calculations.

The developers note that, when compiling the rating, they do not take into account the number of visitors to the sites and their design. In the ranking model, based on the analysis of the network presence of higher education institutions, 3 generalizing directions are defined, which provide for the analysis of activities according to the following sections (Table 2) [9].

Table 2. The evaluation criteria of the Ranking Web or Webometrics

Indicators	Meaning	Methodology	Source	Weight
Visibility	Web contents Impact	Number of external networks (subnets) linking to the institution's webpages (normalized and then the maximum value is chosen)	Ahrefs Majestic	50%
Transparency (or openness)	Top cited researchers	Number of citations from Top 310 authors (excluding the top 30 outliers)	Google Scholar Profiles	10%
Excellence (or scholar)	Top cited papers	Number of papers amongst the top 10% most cited in each one of the all 27 disciplines of the full database Data for the five-year period: 2017-2021	Scimago	40%

Sources: [9]

3. The SCImago Institutions Rankings (SIR). The SCImago Institutions Rankings is a classification of academic and research-related institutions ranked by a composite indicator that combines three different sets of indicators based on research performance, innovation outputs and societal impact measured by their web visibility [10].

Every year, starting from 2009, the SCImago company publishes a report that presents the results of evaluating the scientific activity of universities and other research institutions according to parameters that characterize the volume, thematic diversity and academic influence of scientific publications. In 2023, such indicators are three groups of parameters presented in the table 3.

Table 3. The evaluation criteria of the SCImago Institutions Rankings

Criteria	Indicator	Weight
Research (50%)	Normalized Impact (NI)	13%
	Excellence with Leadership (EwL)	8%
	Output (O)	8%
	Scientific Leadership (L)	5%
	Not Own Journals (NotOJ)	3%
	Own Journals (OJ)	3%
	Excellence (Exc)	2%
	High Quality Publications (Q1)	2%
	International Collaboration (IC)	2%
	Open Access (OA)	2%
	Scientific Talent Pool (STP)	2%
Innovation (30%)	Innovative Knowledge (IK)	10%
	Patents (PT)	10%
	Technological Impact (TI)	10%
Societal (20%)	**Altmetrics (AM)**	10%
	Inbound Links (BN)	5%
	Web Size (WS)	5%

Sources: [10]

Indicators are divided into three groups intended to reflect scientific, economic and social characteristics of institutions. The SIR includes both, size-dependent and size-independent indicators; that is indicators influenced and not influenced by the size of the institutions. In this manner, the SIR provides overall statistics of the scientific publication and other output of institutions, while enables comparisons

between institutions of different sizes. It needs to be kept in mind that, once the final indicator has been calculated out of the combination of the different indicators (to which a different weigh has been assigned) the resulting values have been normalized on a scale of 0 to 100.

4. Times Higher Education rating [11]. This international ranking is based on the ranking of research universities, not academic ones. The condition for inclusion in the rating is the publication of university teachers - at least 1,000 scientific articles over the past five years in journals included in the Scopus database.

When compiling the rating, 13 indicators are taken into account, which are grouped into 5 groups (Table 4).

Table 4. The evaluation criteria of the Times Higher Education

Criteria	Indicator	Weight
Teaching (the learning environment) – 30%	Reputation survey	15%
	Staff-to-student ratio	4.5%
	Doctorate-to-bachelor's ratio	2.25%
	Doctorates-awarded-to-academic-staff ratio	6%
	Institutional income	2.25%
Research (volume, income and reputation) - 30%	Reputation survey	18%
	Research income	6%
	Research productivity	6%
Citations - 30%	*Research influence*	*30%*
International outlook (staff, students, research) - 7.5%	Proportion of international students	2.5%
	Proportion of international staff	2.5%
	International collaboration	2.5%
Industry income	*Knowledge transfer*	*2.5%*

Sources: [11]

Every year, the methodology for calculating the ranking of world universities of Times Higher Education is checked by the independent audit company PricewaterhouseCoopers (PwC).

5. The QS World University Rankings [12]. The rating is compiled by the British company Quacquarelli Symonds, which provides advice on studying abroad. The rating is based on surveys of employers and teachers from around the world. The main criteria for calculating the rating presented in the table 5:

Table 5. The evaluation criteria of the QS World University Rankings

Parameters	Weightage
Academic Reputation	40%
Employer Reputation	10%
Faculty/Student Ratio	20%
Citations per faculty	20%
International Faculty Ratio /International Student Ratio	10%

Sources: [12]

The criteria of this rating are quite different from the previous one, but the indicator itself poses a threat to the front-end security of non-American universities.

Almost 20% of respondents from the academic community are US residents, so American universities receive a higher score. The uneven distribution affects both employers and industries. Another significant threat is the calculation of the "number of students to the number of teachers" indicator due to the impossibility of checking the reliability of the data provided by the universities themselves. In the survey, the category of teachers includes both those who are directly engaged in teaching and scientific workers, which also slightly distorts the final indicator. The reliability of the rating is generally influenced by the number of foreign teachers and students, as both those who are full-time foreign workers and those who only teach a "guest course" are taken into account. The situation is similar with the calculation of the number of students.

6. U-Multirank [13]. U-Multirank takes a different approach to the existing global rankings of universities. It is multi-dimensional and compares university performances in the different activities that they are engaged in. It is not confined to research but takes into account different aspects and dimensions of the performance of universities: teaching and learning, research, knowledge transfer, international orientation and regional engagement. The U-Multirank does not produce a combined, weighted score across these different areas of performance and then use these scores to produce a numbered league table of the world's 'top' 100 universities. The underlying principle is that there is no theoretical or empirical justification for such composite scores. Empirical studies have shown that the weighting schemes of existing global rankings are not robust: small changes in the weights assigned to the underlying measures (the indicator scores) will considerably change the composite scores and hence the league table positions of individual universities.

Therefore, the U-Multirank methodology looks at the scores of universities on individual indicators and places these in five performance groups ("very good" through to "weak").

The evaluation criteria of the U-Multirank are presented in Figure 1.

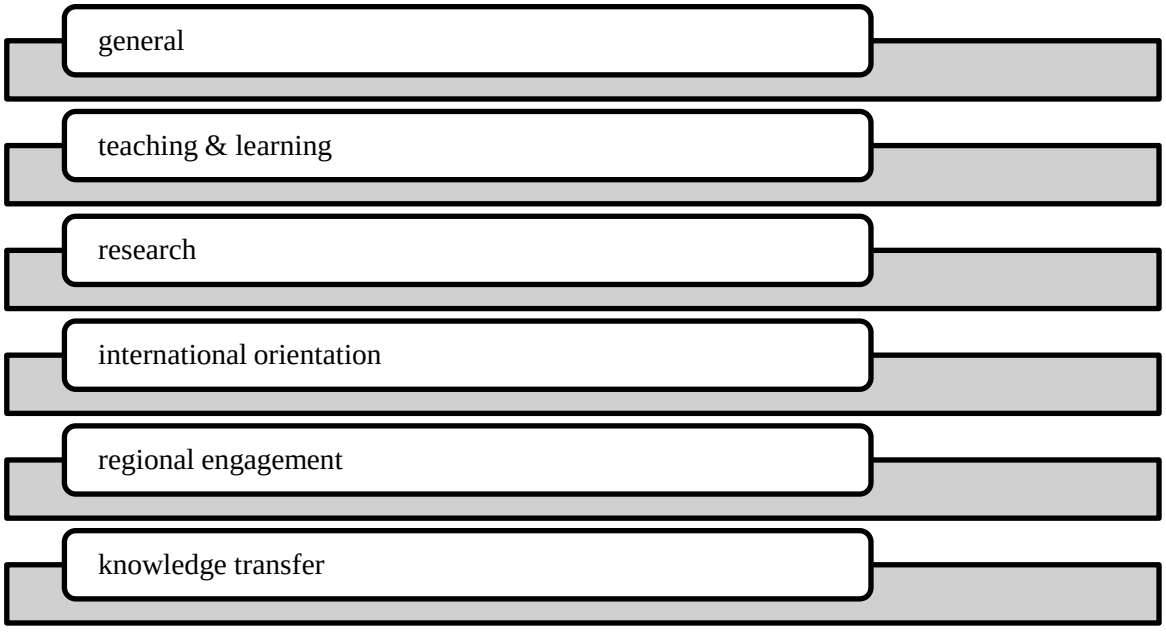

Figure 1. The evaluation criteria of the U-Multirank

Sources: [13]

Results. On the basis of the conducted research, the main criteria for evaluating universities in international rankings are summarized (Table 6).

It has been established that the Shanghai Ranking's Academic Ranking of World Universities pays more attention to the quality of: educational services, teaching staff, research, as well as the representation of universities in the educational space.

Instead, the Ranking Web or Webometrics pays attention to quantitative parameters such as: the number of external links to the university's website, the number of citations and the number of the most cited scientific works of the university's researchers. SCImago Institutions Rankings is more multifaceted and focuses on research, innovation and social aspects of university development.

Times Higher Education rating involves evaluating universities based on: quality of educational services; quality, productivity and funding of scientific research; citation of scientific publications; international integration and collaboration of the university; as well as commercialization of scientific research results. The QS World University Rankings also pay great attention to university quality by assessing: academic reputation, reputation of graduates among employers, faculties, students and international integration. U-Multirank is a multi-vector rating that allows you to evaluate the university's activities based on various sources of information, both official and expert, according to such types of information as: general; teaching & learning; research; international orientation; regional engagement; knowledge transfer.

Table 6. Main sources of information for international university rankings

№	Sources	ARWU	Webometrics	SCImago	THE	QS	U-Multirank
1	Information from official sources external to the university, which is publicly available	+					
2	Results of a survey of the academic community				+	+	
3	The results of the university survey						
4	Results of the student survey						
5	The results of the survey of employers				+	+	
6	Information from the university website				+	+	
7	Information from scientific profiles of the university			+	+	+	
8	Information from scientific profiles of university employees						
9	Information from the websites of scientific journals						
10	Information from university repositories						

Source: compiled by the author based on [7-15]

Discussions. Since the websites of universities do not contain sufficient information provided for in the criteria specified for the ratings, this does not allow most universities to achieve high positions in the mentioned international ratings, which negatively affects their competitiveness.

Analysis of information sources for determining international rankings made it possible to find out that most universities do not effectively use their own websites to inform the public about their achievements.

The low level of interest of researchers in maintaining their own scientific profiles also significantly lowers the positions of universities in the specified ratings. Administrative efforts by university management and incentives, along with outreach among researchers, can significantly improve universities' positions [profile article].

Also, the majority of universities do not use the advantages provided by Open Science and Plan C, which indicates a low level of transparency of the results of their scientific research and a low level of use of modern information technologies that create opportunities for such transparency.

The closedness of the results of scientific research also narrows the opportunities for attracting additional investments through the commercialization of the results of scientific research.

Conclusions. Based on the results of the research, it is appropriate to draw the following conclusions.

The article analyzes the methodologies of the main international university rankings and highlights the main criteria by which the rankings are calculated.

According to the results of the conducted research, the main sources of information necessary for determining international ratings were systematized, namely: Information from official sources external to the university, which is publicly available; Results of a survey of the academic community; University survey results; Student survey results; The results of the survey of employers; Information from the university website; Information on scientific profiles of the university; Information on scientific profiles of university employees; Information from the websites of scientific journals; Information from university repositories.

The main features that universities should take into account in order to achieve higher positions in international rankings, which will become possible if they comply with the requirements of Plan S regarding Open Science, have been clarified.

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FORMATION OF RESEARCH COMPETENCE OF FUTURE TEACHERS IN INSTITUTIONS OF HIGHER EDUCATION

Mykola Hagarin[1], Vitalii Honcharuk[2], Artem Koshlaba[3]

[1]Doctor of Sciences (Pedagogy), Docent, Professor of Department of Pedagogy and educational management, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: mikolagagarin0@gmail.com, ORCID: https://orcid.org/0000-0002-4773-3303

[2]Ph.D. (Pedagogical Sciences), Senior Lecturer at the Department of Chemistry, Ecology and Relevant Teaching Methodologies, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: gvitalii1975@gmail.com, ORCID: https://orcid.org/0000-0002-3977-3612

[3]Postgraduate Student of Department of Pedagogy and educational management, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: artemkoslaba@gmail.com, ORCID: https://orcid.org/0009-0006-5243-5024

Abstract. *In the article peculiarities of forming research competence of future pedagogues in institutions of higher education are highlighted, the importance and necessity of ensuring the research aspect of professional training is emphasized. The aim of the article – to characterize structure and peculiarities of forming research competence future pedagogues in modern conditions. In research theoretical analysis of scientific works, synthesis, comparison and generalization of approaches to determining the essence and content of research competence, models of its formation are used; the main forms of scientific research activity of future teachers in higher education institutions are determined. The approaches of scientists to the interpretation of the essence of research competence and directions of the organization of scientific research work, its components and tasks are analyzed. The model of forming research competence based on the integration of scientific research into the educational process of the university. The structure of research competence of lecture of higher education institutions is generalized (motivational-value, cognitive, procedural-activity, information-communication, communicative, personal-creative, professional-reflective components). The leading forms of scientific and research activity, which enable the formation of research competence of future teachers, have been determined. It was concluded that the improvement of the process of formation of research competence will contribute to the training of specialists in the conditions of modernization of the education system. Research materials can be used by managers, teachers of higher education institutions, in the system of postgraduate education of pedagogical personnel in the aspect of improving the training of future teachers. The problem of monitoring the state of formation of research competence of future teachers in institutions of higher education requires further research.*

Keywords*: scientific and research activity, research competence, components of research competence, forms of research activity, model of formation of research competence.*

JEL Classification: A23, A29, I28

Formulas: 0; fig.: 0; tabl.: 0; bibl.: 8

Introduction. The versatility and dynamism of a teacher's work necessitates the formation of competent, creative, competitive pedagogical workers.

The relevance and significance of the research aspect of the professional training of the future teacher is due to the complication of the content essence of the educational process, which is stimulated by modern achievements of science, as well as changes occurring in the socio-economic sphere of public life.

Adoption of the new Law of Ukraine "On Higher Education" fundamentally changed the role, tasks and organization of research work in higher education institutions. As stated in the Law of Ukraine "On Higher Education", the level of education obtained under the educational-professional and educational-scientific program provides for the acquisition of higher education graduates the ability to solve complex problems in the field of research and innovation; the educational and

scientific program includes a research (scientific) component of at least 30 percent [1].

Accordingly, the problem of formation of research competence of future teachers is actualized.

Literature review. In the works of scientists (O. Bida, M. Golovan, Y. Lavrysh, S. Sysoeva, Gaff J. G., Healey M., Pruitt-Logan A. S., Sims L. M., Denecke D. D., etc.) highlighted the essence of the competence approach, the concept of "research competence", the specifics of the research competence of future teachers [3; 5; 6; 7; 8; 9].

In the research studies of N. Varga, the formation of research competence of future teachers in the US master's program was analyzed. The scientist emphasizes that the formation of the research competence of a teacher of a higher school in the USA is a continuous process and occurs during his professional training through the use of certain forms and teaching methods. In particular, the following are used: lectures and seminars built on the model of "learning as research", practice, individual, group and independent work, consultation, scientific supervision, preparation of a scientific paper, research implementation, analysis of a specific case, portfolio, research project, problem-based learning, workshop, performance of research tasks, etc. [2].

Scientists Gaff J. G., Pruitt-Logan A. S., Sims L. M., Denecke D. D., researching modern approaches to training doctors of philosophy, emphasize that the calling card of a doctoral degree has always been and remains the requirement to demonstrate mastery in the field of knowledge application and the ability to conduct original research [3].

However, it is necessary to investigate the peculiarities of the formation of research competence of future teachers in higher education institutions.

Aims. Aim of the article is to characterize the structure and features of the formation of research competence of future teachers in modern conditions.

Methodology. To achieve the goal, theoretical analysis of scientific works, synthesis, comparison and generalization of approaches to determining the essence and content of research competence, models of its formation were used; elucidation of the main forms of scientific research activity of future teachers.

Results. The ability to carry out one's own scientific research, the results of which have scientific novelty, theoretical and practical significance belongs to the key competencies of teachers and is necessary for the effective performance of professional activities.

The Law of Ukraine “On Higher Education” (2014) considers “competence” as a dynamic combination of knowledge, abilities and practical skills, ways of thinking, professional, worldview and civic qualities, moral and ethical values, which determines the ability of a person to successfully carry out professional and further educational activity and is the result of studying at a certain level of higher education [1].

As V. Sukhomlynskyi rightly emphasized, true pedagogical creativity is characterized by research, creative generalization of one's work. The person who

feels like a researcher in himself becomes a master of pedagogical work the fastest. If you want pedagogical work to bring joy, introduce every teacher to a happy path of research [4, p. 34].

In the studies of M. Golovan, research competence is defined as "a holistic, integrative quality of the individual, which combines knowledge, abilities, skills, experience of the researcher, value attitudes and personal qualities and is manifested in the readiness and ability to carry out research activities with the aim of obtaining new knowledge through application of methods of scientific knowledge, application of a creative approach in goal setting, planning, analysis, decision-making and evaluation of the results of research activities. Moreover, although research competence is a product of training, it does not directly result from it, but is a consequence of the self-development of the learner's personality, his personal growth, integral self-organization and synthesis of his cognitive, activity and personal experience" (5, pp. 197-198).

Scientist S. Sysoeva considers research competence as an integrated personal and professional quality of a specialist, which reflects his motivation for scientific research, the level of mastering the methodology of pedagogical research (innovative thinking, the ability to be creative and innovative, etc.) [6, p. 10]. The specified definition fully reveals the essence of the concept, however, the concepts of "structure of research competence" and "innovative thinking" in the context of the professional activity of teachers need additional clarification.

The analysis of studies on the structure of the research competence of a teacher of higher education institutions shows that it contains the following components:

– *motivational and valuable*, which reflects the system of values, needs and motives of research activity and emotional-volitional and valuable attitudes of students to the world, activities, people, themselves, to their abilities and their development; conscious perception of the value of modern education; the ability to formulate the goals of research activity in accordance with the hypothesis and tasks of the research;

– *cognitive*– reflects the system of methodological, professional, interdisciplinary scientific knowledge of research activities;

– *procedural and operational* –involves the ability to select adequate goals and tasks, methods of research and data processing, analyze scientific facts, discuss and interpret research results, implement them in practice;

– *informational-communicative* – involves mastering methods of data collection in accordance with hypotheses, creation of arrays of empirical data, processing of various information sources, etc.;

– *communicative* – involves the ability to work with respondents; cooperate with domestic and foreign colleagues in research activities;

– personal-creative - reflects the level of development of the creative qualities of the individual;

– *professional-reflective* – reflects the ability to understand and evaluate the process and result of one's own research activity; ability to self-regulate: availability of knowledge about methods of professional self-improvement; the ability to realize

the level of one's own activity, one's abilities; the ability to see the causes of shortcomings in one's work; the desire to improve oneself, the ability to use the mechanism of self-assessment of one's own achievements in research activities.

This means that a scientist must be able to identify positive and negative points in his work, compare the achieved results with the intended goals and objectives, be realistically aware of his capabilities and, in this regard, adequately plan and implement a scientific research program.

Research competence implies: the presence of ideas about the most relevant directions of research in modern theoretical and experimental science; fluency in a foreign (mainly English) language in the field of professional activity and interpersonal communication; understanding of philosophical concepts in the chosen field of scientific activity; mastery of the methodology of a scientific discipline (branch), knowledge of its regularities and willingness to use knowledge of this field in one's practical activities; the ability to clearly formulate the essence of the researched problem, goal, object, subject, working hypothesis, research task, plan an experiment; understanding of the main methodological principles of scientific research and their application in practice; mastering the methods of scientific research (questionnaires, testing, modeling, observation, etc.); the ability to theoretically substantiate and experimentally verify the proposed idea within the framework of the researched problem; the ability to analyze the results of one's research activities, draw the necessary conclusions (carry out methodological reflection); activity, responsibility and personal participation in the organization of any experiment; the ability to conduct a scientific discussion, defend one's point of view with arguments; the ability to analyze the data of a scientific experiment using the methods of mathematical statistics and computer technologies; the ability to prepare a publication or presentation based on the results of one's scientific work.

Researcher Mick Healey proposed a model of formation of research competence based on the integration of scientific research into the educational process of the university. The scientist singled out four components, each of which corresponds to a certain variant of the combination of education and scientific research:

–research-led learning: students learn about ready-made research results, remaining passive participants in this process, and the transfer of information from the teacher to the student is the main method of learning;

– research-tutored learning: students receive knowledge about ready-made research results, but are involved in an active, joint discussion of scientific problems with the teacher, in scientific discussions;

– research-oriented learning: students learn about scientific processes and problems, the curriculum is built on information about the processes by which educational knowledge was achieved;

– research-based learning: the curriculum is built around research, students are involved in direct scientific activity together with the teacher, where the division of roles between them is minimized [7, p. 3].

Scientist Y. Lavrysh emphasizes that research work has:

–to be as close as possible to the educational process;

–to predict the specificity of the subject; modern scientific level of its implementation in practical activity;

–to be carried out with the gradual complication of research tasks from course to course;

–to be characterized by the professional and creative character of research work, etc. [8, p. 73].

Scientific and research activity corresponds to the general structure of activity, therefore, its components are subject, object, subject, goal, means, result (product) of activity. Subjects of scientific and research activities at the university are scientific and pedagogical workers, graduate students, doctoral students, degree holders, students motivated to conduct their own scientific research.

The participation of young scientists in current research contributes to the formation of creators of a new intellectual product. University teachers must ensure scientific growth through students' implementation of relevant research and scientific and technical developments, and the new knowledge obtained by scientists and university students is the basis for innovative development.

The objects of scientific research activity can be the educational process at the university, professional training of students, scientific research of varying degrees of innovation in the field of knowledge in which he is a specialist (in accordance with the qualifications in his higher education diploma). *The subject* is a part of the object, the study and transformation of which is directed to the scientific search. *The goal* is the planned, predicted result of scientific research (for example, acquiring the necessary skills of creative research activity, in the process of which students solve tasks, as a rule, already developed in science, acquire the ability to independently search for the necessary information.

The main directions of the organization of scientific and research work are to improve the quality of the educational process due to the joint participation of students of higher education and teachers in the performance of various scientific works, namely: the participation of students of higher education in conducting applied, research and fundamental scientific research; support and development of scientific schools of higher education institutions in line with the succession of generations; development of higher education students' ability to make independent, substantiated scientific judgments and conclusions.

The tasks of scientific and research activity are: teaching higher education students methods and means of independent solution of scientific tasks, skills of working in scientific teams; familiarization with the methods of organizing creative work; promoting the successful solution of current problems of science and social development of society.

Scientific and research activity gives the student of higher education the opportunity to show creative initiative, to check the studied material during the performance of practical and laboratory work (in practice), to learn to collect, systematize, analyze and summarize it, to independently conduct research work. All types and forms of research activities of higher education students are aimed at activating creative abilities, applying scientific methods in solving practical

problems. Its content and forms must correspond to the main directions of scientific research activity of the institution of higher education, faculty, department.

Discussion. The main forms of research activities that enable the formation of research competence of future teachers include:

- –participation in the organization and conduct of All-Ukrainian scientific Olympiads, competitions of scientific works; scientific seminars and conferences; exhibitions of creative and scientific works;
- writing essays, abstracts based on selected and studied sources of scientific literature such as: sections of monographs, scientific articles in domestic and foreign publications;
- performance of practical and homework tasks, control papers containing elements of scientific research and requiring students to familiarize themselves with a sufficiently wide range of literature, use of computer and other technology;
- participation in the work of student scientific circles, laboratories, university centers; competition for scientific grants at the university, regional, all-Ukrainian, and international levels;
- preparation and defense of graduation qualification papers related to the issues of scientific research of graduation departments of the university, research divisions of the university, faculties, institutes; publication of theses and articles;
- the ability to perform specific atypical tasks of a scientific and research nature during various types of practices, to perform individual tasks aimed at developing and solving specific problems; comparative psychological and pedagogical analysis of given provisions;
- analytical processing of theoretical material on a specific topic of scientific research through its coding (schemes, tables, diagrams, graphs, etc.);
- development of didactic materials (games, exercises, visualizations, scenarios, lesson notes, poetic texts, project models of pedagogical processes;
- development of a model of pedagogical processes, systems;
- tasks are aimed at carrying out empirical research: questionnaires, interviews, experimental conversation;
- tasks are aimed at carrying out pedagogical research according to the scheme: choosing a problem, its theoretical study, finding a basis for setting up an experiment, developing its program, execution, generalization of results, design and presentation of work;
- the task is aimed at analytical research of the given problem: determination of relevance, analysis of publications, examination of the object of research, comparison with the norms determined in science, detection of deviations, finding a solution to the problem in theoretical recommendations;
- reviewing publications (theses, articles, reports);
- writing scientific articles;
- development of author questionnaires and their implementation in the form of questionnaires, interviews, conversations.

Conclusions. A teacher's research competence is formed in the process of carrying out research activities of future teachers in a science-centered educational environment, where the research activities of teachers and students are closely intertwined, and the obtained results are used in the educational process. The main purpose of such activity is to establish or verify the truth, using available methods of scientific research.

In our opinion, improving the process of formation of research competence is a significant factor in improving the process of training specialists in the conditions of modernization of the education system. The article does not cover all aspects of the raised problem. Research requires the problem of monitoring the state of formation of research competence of future teachers in higher education institutions.

Author contributions. The authors contributed equally.

Disclosure statement. The authors do not have any conflict of interest.

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CHAPTER 3
THEORY AND METHODS OF VOCATIONAL EDUCATION

A COMPETENT APPROACH TO THE TRAINING OF LAWYERS IN "CYBERTERRORISM"

Ali Jabbar Salih[1], Farouq Ahmad Al Azzam[2]

[1]Ph.D. (Law), Professor, Dean of law college, Faculty of Law, Jadara University, Jordan, e-mail: dr_alijabbar@yahoo.com, ORCID: https://orcid.org/0000-0003-1975-1173

[2]Ph.D. (Law), Assistant professor, Head of the Law Department, Faculty of Law, Jadara University, Jordan, e-mail: alazzamfarouq@yahoo.com, ORCID: https://orcid.org/0000-0002-7817-9704

Abstract. *As a result of the extremely wide use of modern information and communication technologies in all spheres of existence, society has become vulnerable to cybernetic influences. The flows of information transmitted, stored and processed in cyberspace are constantly increasing, which requires their proper protection against unauthorized access for criminal purposes. Given the widespread concern about cyberterrorism and the frequent use of the term "cyberterrorism" today, many international organizations have made efforts to combat this threat. A special place among institutions that can directly or indirectly counter cyberterrorism is occupied by universities that offer bachelor's and master's degrees in law and cyber security, in particular cyber terrorism. The presence of qualified personnel specializing in both legal knowledge and knowledge in the field of information technology will contribute to the creation of prerequisites for effective countermeasures against cyber terrorism in Jordan and in other countries of the world. The purpose of the article is to investigate the role of the law college in training lawyers capable of countering cyberterrorism. In order to assess the influence of external and internal factors on the activities of the Jadara University College of Law, the study conducted a survey of four categories of respondents: students, their parents, employees and employers. All respondents were offered questionnaires with a list of questions, the purpose of which was to reveal the level of awareness regarding the definition of criteria that could potentially be included in the new master's degree program in the specialty "Cyberterrorism". Based on the results of the research, the main competencies that future students of the master's degree "Cyberterrorism" should possess are established, namely: in the field of international law; in the field of international relations; in the field of international and national security; in the field of information technologies; in the field of cyber security; in the field of communication technologies, etc. Hence, Jadar University College of Law makes a direct contribution to the social, cultural and economic development of society, and graduates of the College of Law are important ambassadors of the College and play a key role in maintaining safety in the community and providing space and improving opportunities for members of the local community to access the College of Law and use the various services it provides.*

Keywords: *law; information; information technology; cyber security; cyberterrorism; competent approach; training; lawyer.*

JEL Classification: A23, A29, I28

Formulas: 0; fig.: 2; tabl.: 11; bibl.: 10

Introduction. As a result of the extremely wide use of modern information and communication technologies in all areas of its existence, society has become vulnerable to cybernetic influences, which are increasingly becoming an effective tool for achieving the goal of non-forceful control and management of both state infrastructure objects, enterprises, and individual citizens, their associations The flows of information transmitted, stored and processed in cyberspace are constantly

increasing, which requires their proper protection against unauthorized access for criminal purposes. Strengthening cybersecurity is therefore critical to ensure people trust and benefit from innovation, connectivity and automation, and to protect fundamental rights and freedoms, including the right to privacy and protection of personal data, as well as freedom of expression and information.

Given the widespread concern about cyberterrorism and the frequent use of the term "cyberterrorism" today, many international institutions have made efforts to combat this threat. Because cyberterrorism is an international crime, local laws alone cannot protect against such attacks and they require an international response. A country that is a victim of cyber terrorism will rely on international law to redress any damage caused through the application of universal jurisdiction. A special place among institutions that can directly or indirectly counter cyberterrorism are universities that provide bachelor's and master's degrees in law and cyber security, including cyberterrorism. The availability of qualified personnel who specialize in both legal knowledge and knowledge in the field of information technology will contribute to the creation of prerequisites for effective countermeasures against cyberterrorism in Jordan and in other countries of the world.

Literature review. For the first time, concern about the possible consequences of using the World Wide Web was expressed in 1993 by Alvin Toffler, when the general public still knew little about the Internet. Toffler already predicted that terrorists would try to attack the information and telecommunications infrastructure of the United States. Since then, a significant amount of research has been carried out, and the opinions of experts regarding the concept of "cyberterrorism" are polarly divided [1].

The definition of information or cyber terrorism can be found both in international legal documents and draft conventions, as well as in the research of experts on this issue. One of the characteristic features of the definitions of information terrorism is that in the vast majority of them only one aspect of information security is mentioned, namely related to the means of information processing, which narrows the concept of information terrorism, thereby limiting the scope of legal regulation, which does not contribute to effective cooperation of states in the fight against information terrorism [1].However, let us emphasize that there is currently no generally accepted definition. But in the theoretical aspect it is about the integration of such concepts as "terrorism" and "computer crime".

The first examples of "computer terrorism" appeared in the late 1990s, which is connected both with the development of computer networks and with the growing role of computers in all spheres of life. As a result, the attention of various "cyber bullies" and "cyber terrorists" who carry out attacks using unauthorized access to interfere with the normal work of relevant institutions has increased.

Cyber terrorism is defined as a deliberate and motivated attack on information processed by a computer, a computer system or a network, which is associated with a danger to the life and health of people or the occurrence of other serious consequences, if such actions are committed with the aim of violating public safety , intimidation of the population, provoking a military conflict [2].

The first comprehensive treatment of the cyberterrorism threat was performed by the Center on Terrorism and Irregular Warfare (CTIW) at the Naval Postgraduate School (NPS) in Monterey, California. In august 1999, they issued a report on the prospects of terrorist organizations pursuing cyberterrorism. They concluded that the barrier to entry for anything beyond annoying hacks is quite high, and that terrorists generally lack the wherewithal and human capital needed to mount a meaningful operation [10].

Cyberterrorism, they argued, was a thing of the future, although it might be pursued as an ancillary tool.

The NPS study defined three levels of cyberterror capability (Figure 1):

- *Simple-Unstructured:* The capability to conduct basic hacks against individual systems using tools created by someone else. The organization possesses little target analysis, command and control, or learning capability.
- *Advanced-Structured:* The capability to conduct more sophisticated attacks against multiple systems or networks and possibly, to modify or create basic hacking tools. The organization possesses an elementary target analysis, command and control, and learning capability.
- *Complex-Coordinated:* The capability for a coordinated attacks capable of causing mass-disruption against integrated, heterogeneous defenses (including cryptography). Ability to create sophisticated hacking tools. Highly capable target analysis, command and control, and organization learning capability.

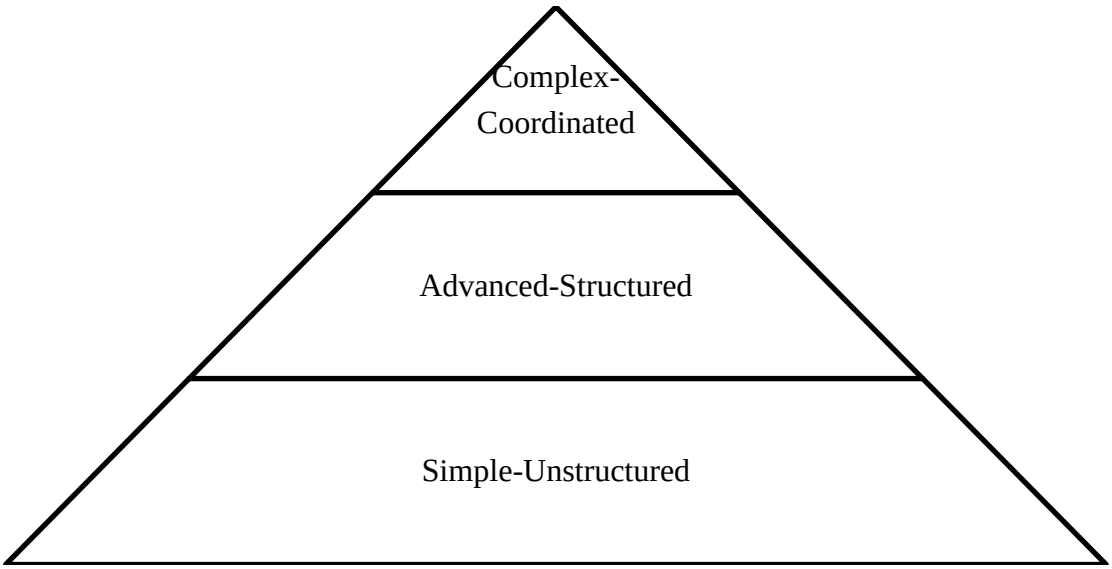

Figure 1. The three levels of cyberterror capability

Source: created by the author based on [10]

They estimated that it would take a group starting from scratch 2-4 years to reach the advanced-structured level and 6-10 years to reach the complex-coordinated level, although some groups might get there in just a few years or turn to outsourcing or sponsorship to extend their capability.

The study examined five terrorist group types: religious, New Age, ethno-nationalist separatist, revolutionary, and far-right extremists. They determined that only the religious groups are likely to seek the most damaging capability level, as it is

consistent with their indiscriminate application of violence. New Age or single issue terrorists, such as the Animal Liberation Front, pose the most immediate threat, however, such groups are likely to accept disruption as a substitute for destruction. Both the revolutionary and ethno-nationalist separatists are likely to seek an advanced-structured capability. The farright extremists are likely to settle for a simple-unstructured capability, as cyberterror offers neither the intimacy nor cathartic effects that are central to the psychology of farright terror. The study also determined that hacker groups are psychologically and organizationally ill-suited to cyberterrorism, and that it would be against their interests to cause mass disruption of the information infrastructure.

The NPS researchers applied their general knowledge of terrorists and cyber weapons to evaluate the threat of cyberterrorism. By contrast, my recent work is based on identifying indicators of cyberterrorism. These are pieces of evidence that demonstrate a capability or intent to conduct acts of cyberterror. The ones I have identified so far fall into five categories:

- Execution of cyber attacks. This covers all types of computer network attack, not just acts of cyberterror.
- Cyber weapons acquisition, development, and training. This includes acquisition and distribution of cyber weapons, research and development in cyberweapons, and training in the use of cyberweapons. Activities can take place on-line or in special facilities.
- Statements about cyber attacks. This covers all types of statements relating to cyber attacks, including discussions, declarations of intent, and calls for performing cyber attacks.
- Formal education in information technology. This includes all areas of IT education, but especially studies in network and information security.
- General experience with cyberspace. This covers cyber activities that do not fall within the first four categories, including general use of the Internet for communications and distribution of news and propaganda.

The categories are listed in order of generally decreasing significance; that is, the actual execution of cyber attacks carries more weight than acquisition and development of cyber attack tools, which in turn carries more weight than simply making statements about cyber attacks, and so on. However, the ordering is not strict, as the nature of the evidence also matters. Evidence of a cyber training camp that has been instructing scores of cyber jihadists in attacks against the Supervisory Control and Data Acquisition (SCADA) would be a stronger indicator of cyberterrorism than evidence of a successful web defacement. SCADA and other types of digital control systems are used to monitor and control critical infrastructures such as for electricity, oil and gas, water, dams, and sewage, and are considered likely candidates for cyberterrorist attacks.

The last two categories, formal education in information technology (IT) and general experience in cyberspace are not indicators of cyberterrorism so much as enablers. A terrorist could study computer science, for example, in order to manage information resources such as websites for the organization. Even a focus on network

security could be for the purpose of defending terrorist systems and information rather than launching cyber attacks. Still, terrorists with formal education in IT and experience using the technology are in a better position to develop a cyberterror capability than those without this background, so evidence in these categories is relevant to assessing the cyberterror threat.

In seeking evidence relating to these indicators, I considered activities attributable not only to terrorist groups, but also to hackers expressing an alliance or sympathies with such groups. Although the latter may not be willing to engage in physical acts of violence, they may be amenable to causing extensive damage to information resources.

Also, it can be difficult to know the exact relationship between a terrorist group and hackers claiming some sort of affiliation. The Al-Qaeda Alliance Online, for example, appeared to have no formal ties to the terrorist organization, but it might be considered part of the broader jihadi movement associated with it.

Although it is not hard to carry out relatively simple cyber attacks using readily available hacking tools, considerably greater skill would be required to develop software to perform original and highly damaging attacks against critical infrastructures. For such attacks, formal education in a field such as computer science or computer engineering would be helpful, especially if the program of study included digital controls sytems and network security. Although courses in information and network security emphasize how to defend against cyber attacks, they inevitably teach something about attacks, as it is not possible to build adequate defenses without a solid understanding of the threat.

A few people with formal education in these areas have been associated with terrorist groups. Sami Al-Arian, the professor at the University of South Florida charged with raising money for Palestinian Islamic Jihad, was in the department of Computer Science and Engineering. Although Al-Arian’s area of specialty did not appear to be network security, Sami Omar Al-Hussayen, the Saudi graduate student at the University of Idaho charged with operating websites used to recruit terrorists, raise money to support terrorism, and disseminate inflammatory rhetoric, was studying computer security in the Computer Science Department. However, neither Al-Arian or Al-Hussayen were convicted of any crimes.

The results of the study showed the lack of systematic generalizations regarding the necessary competencies that should be possessed by persons studying in the specialty "Cyberterrorism" at universities.

Aims. The purpose of the article is to study the role of the College of Law in training lawyers capable of countering cyber terrorism.

Methodology. The basis of the research methodology was the study of the experience of the College of Law, Jadara University by conducting a survey among potential employers of future graduates from the "Cyberterrorism" specialty.

The College of Law was established at the beginning of the establishment of the university in 2006. The College of Law is one of the oldest and largest colleges of the university, and the incubator of its most important departments: Bachelor's and Master's Law, which was established in 2008, and Political Science, which was

established in 2018.

The main findings of the study found that the College of Law, Jadara University aims to be a scientific college that provides the community with qualified personnel who possess science and knowledge and are also trained in research to continuously develop performance, meet the needs of the labor market and contribute to the development and service society

An analysis of the student body of the College of Law, Jadara University has shown that the total number of students is increasing every year, which shows the prestige of the College of Law among students, their parents and employers. However, unfortunately, the contingent of master's students is decreasing (table 1).

Table 1. Student contingent of the College of Law, Jadara University for 2020-2022

Degree	Year	The total number of students	The number of graduate students
Bachelor's degree in law and political science	2020	413	117
	2021	507	108
	2022	630	0
Master of Law	2020	165	25
	2021	159	25
	2022	71	0
Master of Laws in Cybercrime	2020	0	0
	2021	12	0
	2022	3	0

In order to assess the influence of external and internal factors on the activities of the College of Law, Jadara University, a survey of four categories of respondents was conducted: students, their parents, employees and employers. All respondents were offered questionnaires with a list of questions, the purpose of which was to identify the level of awareness regarding the definition of criteria that could potentially be included in the new educational program of the master's degree in "Cyberterrorism".

1) *Results of a survey of College of Law students.* 216 participants took part in the student survey, representing all levels of education (Figure 2).

From the point of view of students of the College of Law, indicators related to international cooperation programs and opportunities to obtain international certificates became priorities. Such a position of today's youth is not surprising at the time of the development of intercontinental economic integration, but it can become a threat to the College of Law, if we do not respond in a timely manner to the expansion of the offer of such programs (Figure 3).

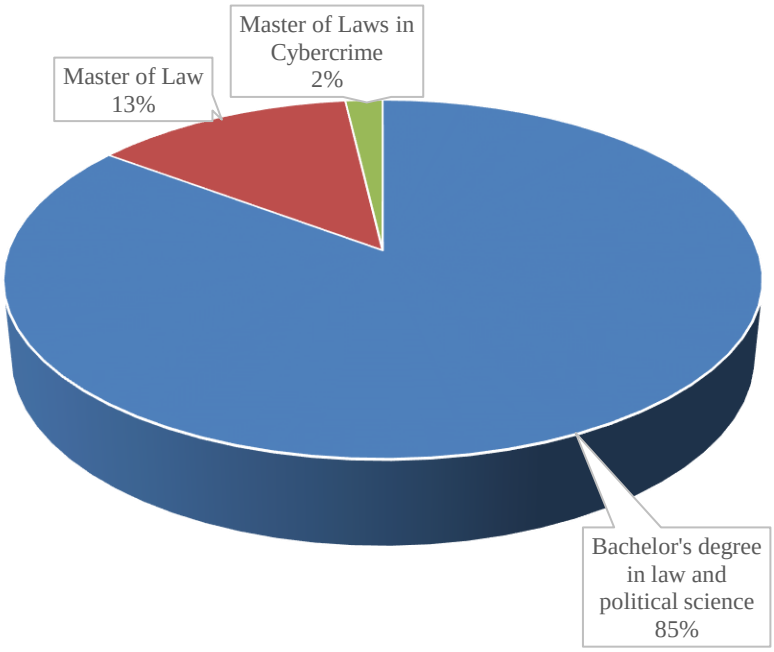

Figure 2. Distribution of College of Law students who took part in the survey by levels and areas of study

Source: Created by author based on survey data

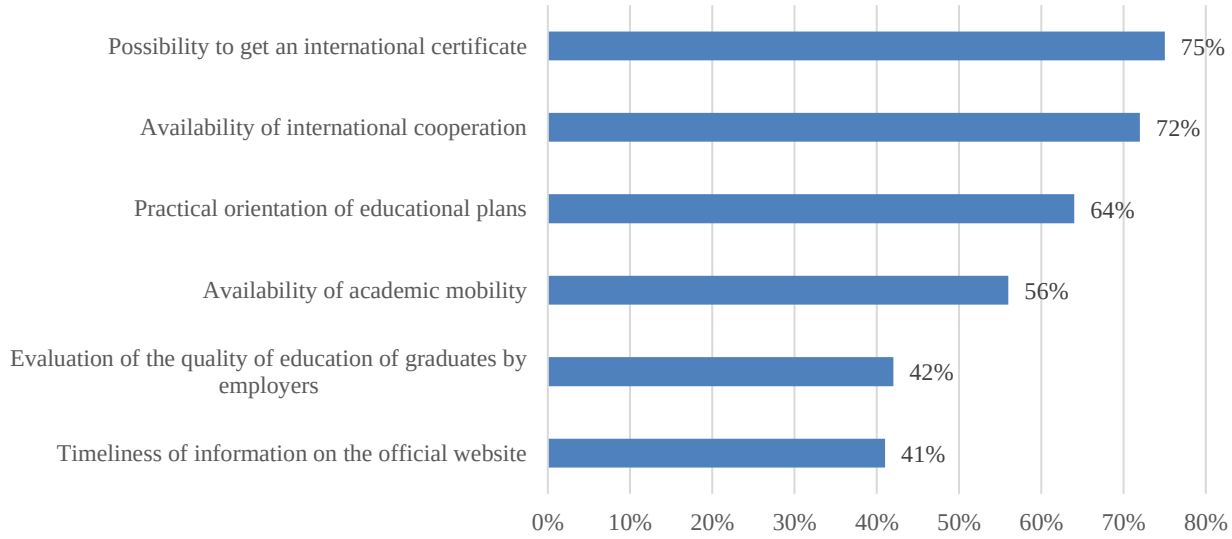

Figure 3. Priority criteria determined by students

Source: Created by author based on survey data

In their answers, the surveyed students indicated the main competencies they would like to have after completing their studies (Figure 4).

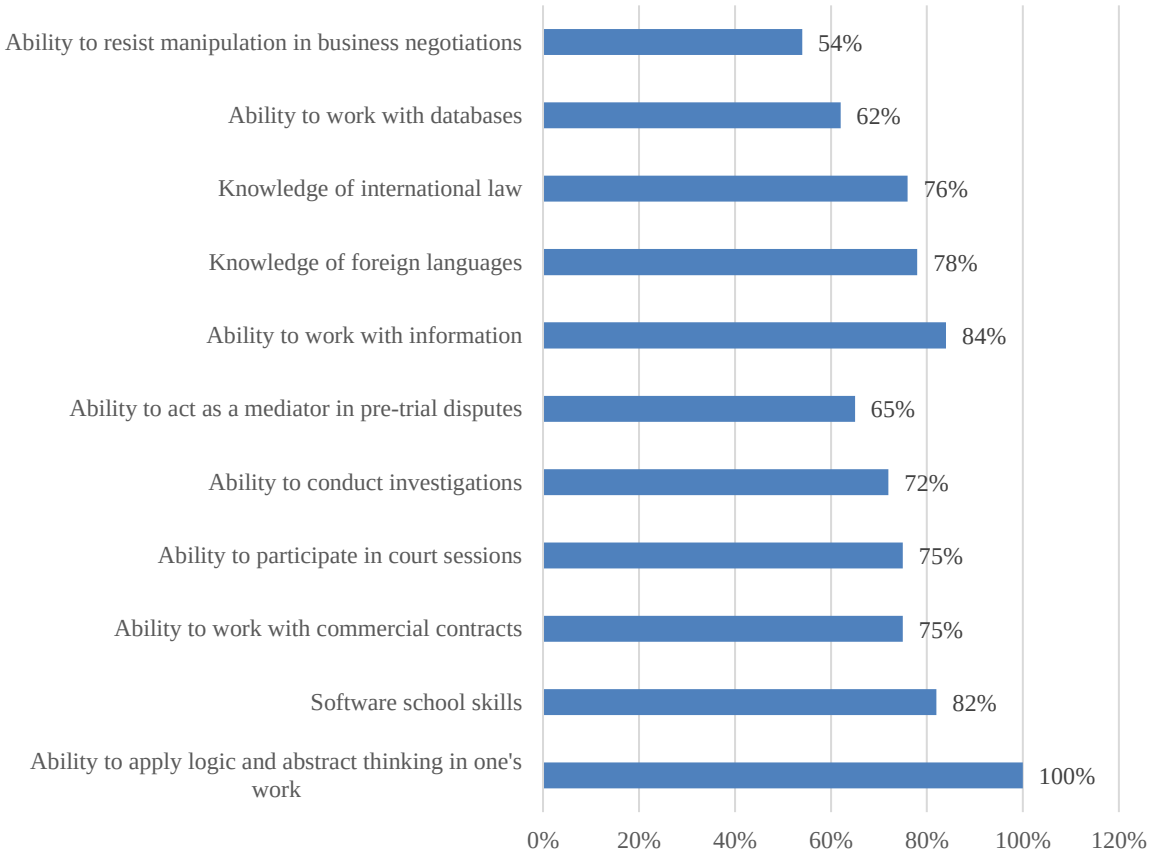

Figure 4. Priority competencies identified by students

Source: Created by author based on survey data

Analytical thinking (100%), ability to work with information (84%), soft skills (82%) and knowledge of foreign languages (78%) are among the main competencies that College of Law students seek to acquire during their studies. According to the students who took part in the survey, it is precisely such competencies that will contribute to their active employment after graduation.

2) *Results of a survey of parents of College of Law students.* The survey of this category of respondents was conducted among parents of students of the College of Law, Jadara University. 312 participants took part in the survey, whose answers allow us to identify the five main indicators that guided them when choosing an educational institution for their children's admission (Figure 5).

If we talk about the priorities in choosing an educational institution, then we can observe the common position of two categories of respondents - practical orientation of curricula (84%), the possibility of obtaining an international certificate (82%) and the presence of international cooperation (78%).

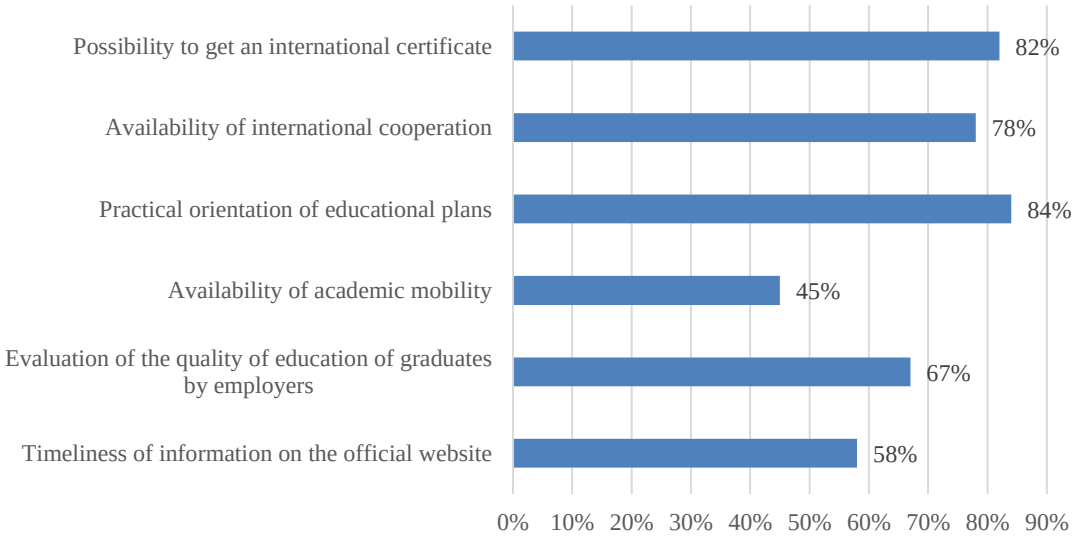

Figure 5. Priority criteria defined by parents of College of Law students
Source: Created by author based on survey data

Among the main competencies that, in the opinion of students' parents, their children should possess after completing their studies, there are both general competencies regarding logical thinking and knowledge of foreign languages, as well as special competencies depending on the specialty chosen by the students (Figure 6).

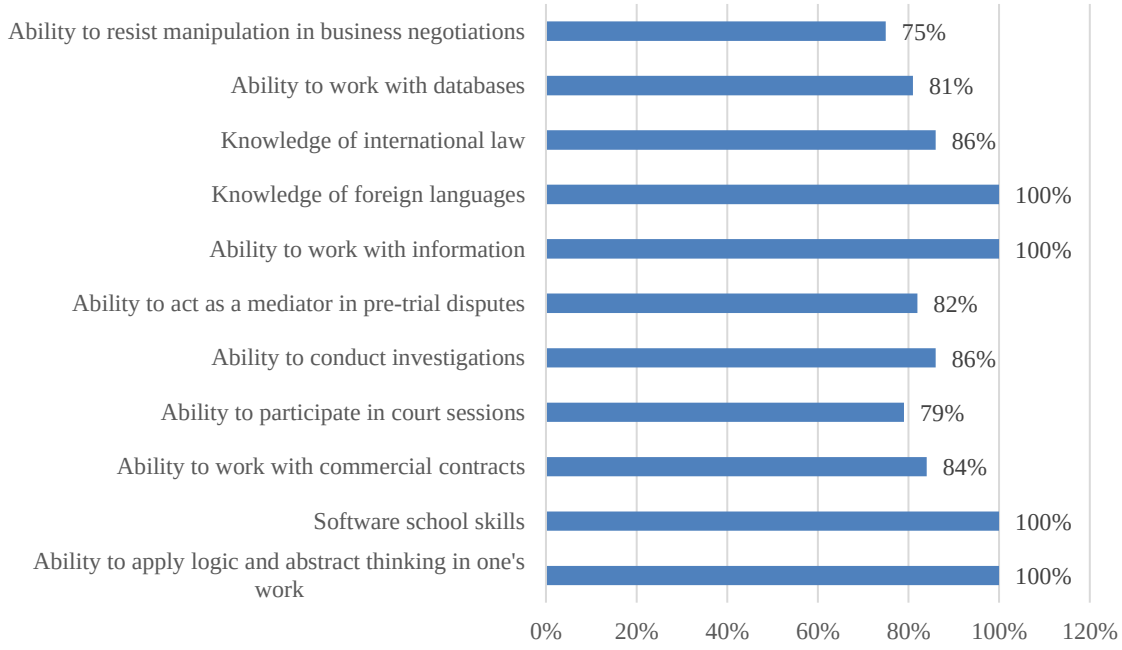

Figure 6. Priority competencies identified by parents of College of Law students
Source: Created by author based on survey data

Respondents also proposed several options for additional criteria:

- The psychological climate in the educational institution, the student's desire to study or not to study in this educational institution;
- The number of graduates employed by their specialty;

- Correspondence of the level of teaching and knowledge of teachers to modern trends in the IT field (that is, does the knowledge acquired by students meet the requirements of employers);
- Feedback from parents;
- The atmosphere of the establishment, comfort and friendliness; creative projects, student events.

3) *Results of a survey of employees of the College of Law.* All college employees took part in the survey. From the point of view of employees, the five indicators that should become a priority in the work of the college regarding the formation of a positive image should include "Practice-oriented curricula", "Availability of academic mobility", "Evaluation of the quality of education of graduates by employers", "Evaluation of the quality of education by graduates" and "Involvement of employers in the discussion of educational programs" etc. (Figure 7).

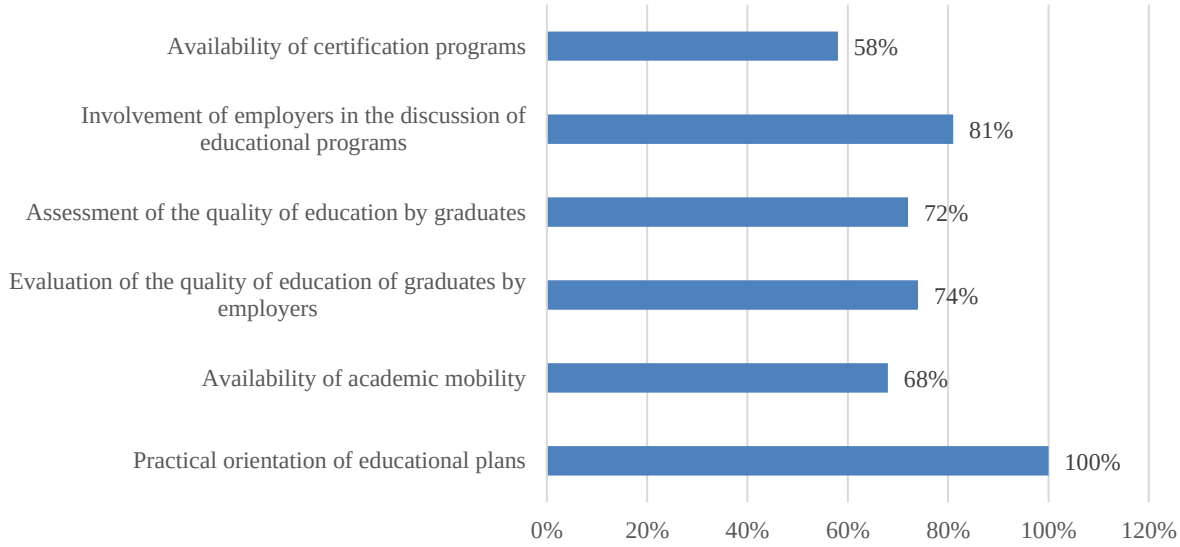

Figure 7. Priority criteria determined by College of Law staff

Source: Created by author based on survey data

Some of the indicated respondents also named among the important indicators in the formation of a positive image of the College of Law:

- efficiency of the internal system of ensuring the quality of education and educational activities;
- development of personal autonomy of education seekers, freedom of choice of educational opportunities;
- involvement of the maximum number of willing education seekers in scientific, innovative and creative projects, with rewards for achievements;
- creation of an alumni association to acquaint students with stories of personal success of graduates, holding meetings with famous scientists, successful lawyers, politicians, public intellectuals, philosophers, writers;
- healthy environment of the institution.
- the issue of spiritual, cultural and patriotic education.

Among the core competencies, which, according to the employees of the College of Law, should be logical thinking (100%), knowledge of commercial

contracts (95%), the ability to conduct investigations (89%), work with information (88%) and arrays of data (88 %) (Figure 8).

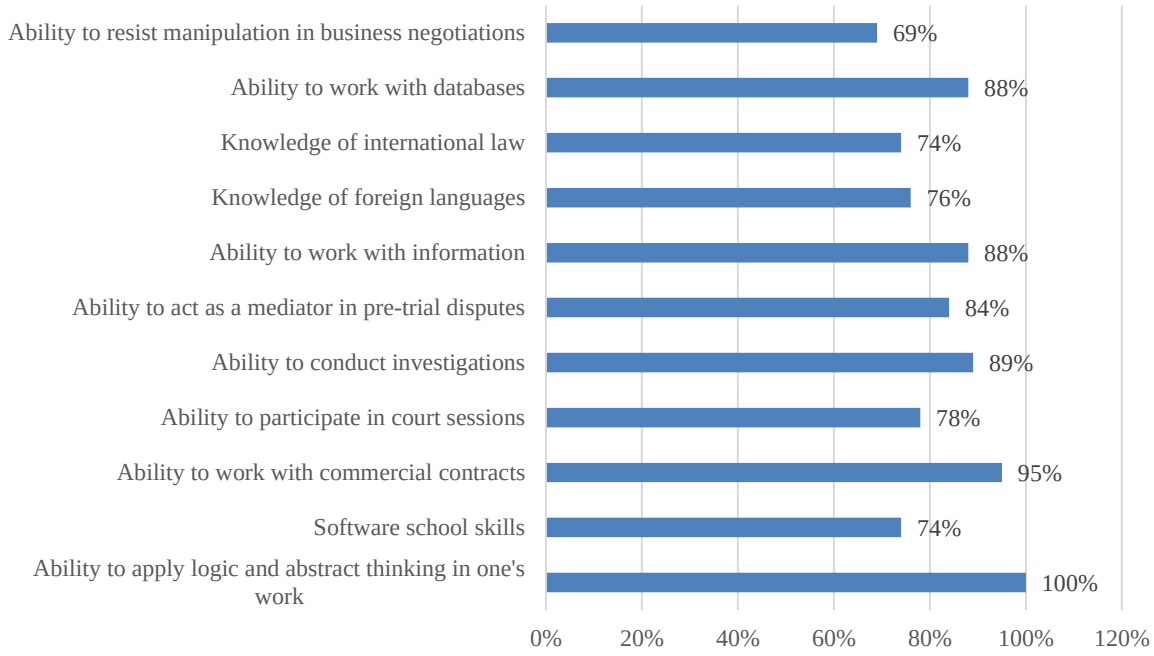

Figure 8. Priority competencies identified by College of Law staff

Source: Created by author based on survey data

At the same time, we would like to draw attention to the fact that knowledge of international law and the availability of soft skills were noted by only 74% of the surveyed employees.

4) *Employer survey results.* In our opinion, an important issue in determining the attractiveness of the College of Law was to involve in the survey employers who are the most interested party in obtaining highly qualified specialists, creating jobs, thereby ensuring successful employment of graduates.

86 participants took part in the survey of the specified category of respondents, representing sixteen areas of activity. Representatives of the spheres of activity "Commercial companies", "Public sector", "Small business", "Law enforcement agencies", "Law offices", "Courts", "Mediators" and "Others" made up the specific weight (Figure 9).

Analysis of the survey results helps to understand which, from the point of view of employers, indicators in the work of the College of Law are important in the formation of popularity in the market of educational services. The definition of the priority criteria related to the practical skills of graduates - "Practice-oriented curriculum" and "Evaluation of the quality of education of graduates by employers" is quite clear.

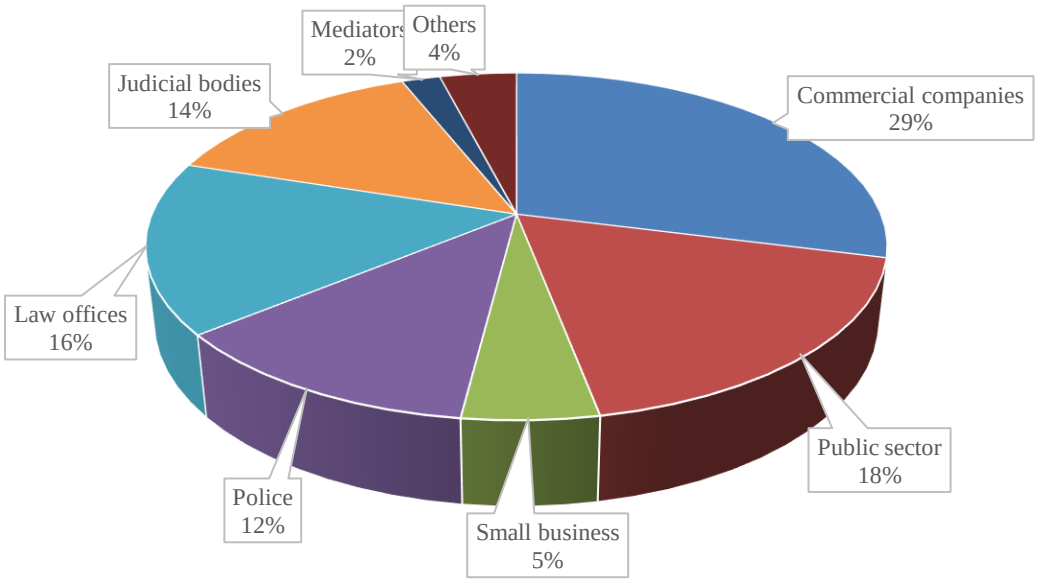

Figure 9. Distribution of employers according to spheres of activity

Source: Created by author based on survey data

The indicator related to the cooperation of educational institutions with representatives of the labor market regarding the formation of educational and professional programs received a high level (Figure 10).

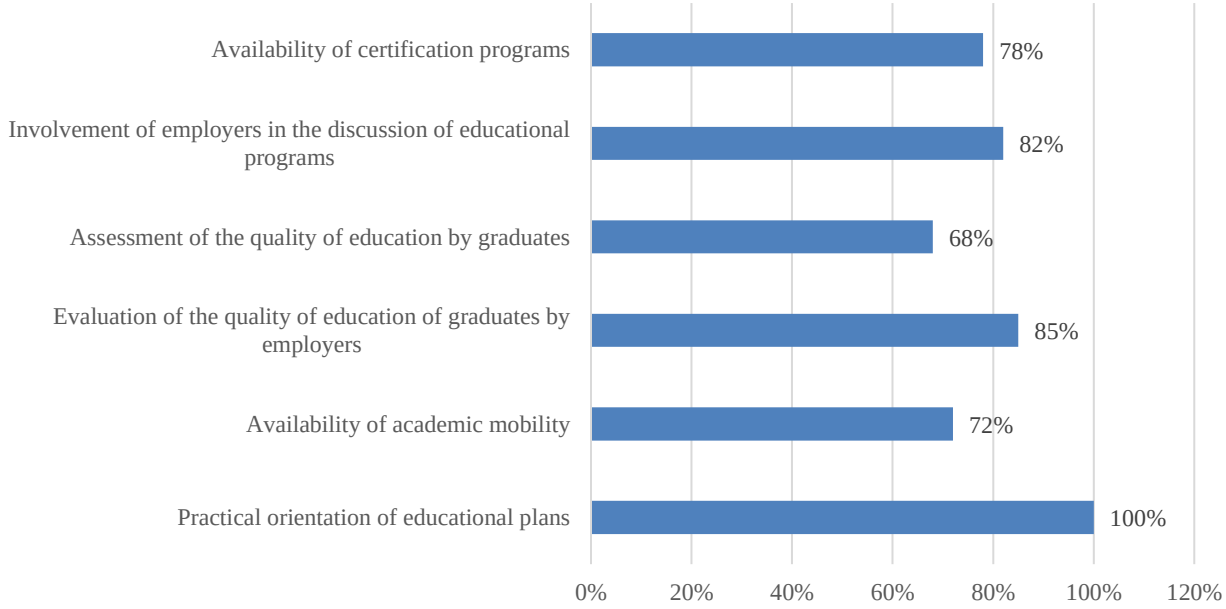

Figure 10. Priority criteria defined by employers

Source: Created by author based on survey data

Regarding the main competencies that graduates of the College of Law should possess, the majority of employers named: logical thinking (100%), ability to work with information (94%) and databases (92%) (Figure 11).

Figure 11. Distribution of criteria by employers

Source: Created by author based on survey data

The majority of employers who took part in the survey indicated that logical thinking and the ability to work with information were prioritized over special legal skills, although they also played a significant role in the training of future lawyers.

Results&Discussion. Based on the results of the research, the main competencies that future students of the master's degree in "Cyberterrorism" should possess were summarized, namely: competencies in the field of international law; competences in the field of international relations; competencies in the field of international and national security; competencies in the field of information technologies; competences in the field of cyber security; competences in the field of communication technologies, etc.

Summarizing the results of the review of scientific works and the results of the survey, we consider it necessary to propose the introduction of new disciplines that will complement the existing curricula and allow students to acquire new competencies that meet the requirements of the modern labor market in the specialty "Cyberterrorism" (table 2).

So, the College of Law, Jadara University makes a direct contribution to the social, cultural and economic development of the society and the graduates of the College of Law are important ambassadors of the College and play a key role in maintaining safety in the society and providing space and improving opportunities for members of the local community to obtain access to the College of Law and take advantage of the various services it provides.

Table 2. The need to introduce new disciplines for students

Subjects	Competences
International law	- demonstrate knowledge of international law in the field of information protection
International relations	- - demonstrate understanding of the essence of globalization processes and analyze their impact on international relations; - - to demonstrate in-depth knowledge of international and national security problems, international and internationalized conflicts, approaches, methods and mechanisms of ensuring security in the international space and in the foreign policy of states; - - identify and forecast political, diplomatic, security, social and other risks in the field of international relations and global development; - - evaluate and analyze international and foreign policy problems and situations, propose approaches to solving such problems; - - to organize and conduct independent studies of international relations problems using scientific theories and concepts, scientific methods and interdisciplinary approaches
International security	- - to demonstrate in-depth knowledge of international security problems, international and internationalized conflicts, approaches, methods and mechanisms of ensuring security in the international space and in the foreign policy of states; - - evaluate and analyze international and foreign policy problems and situations, propose approaches to solving such problems; - - to organize and conduct independent studies of international relations problems using scientific theories and concepts, scientific methods and interdisciplinary approaches
National security	- demonstrate in-depth knowledge of national security issues, international and internationalized conflicts, approaches, methods and mechanisms for ensuring security in the international space and in the foreign policy of states
Cyber security	- - demonstrate knowledge of international law in the field of information protection; - - demonstrate practical skills of users with computer equipment and software; - - the ability to assess the quality, appropriateness, completeness, effectiveness, and adequacy of information and directly sources of information for a specific purpose or policy of the organization (including the authority and timeliness of information)
Communication technologies	- - demonstration of the ability to critically evaluate the textual or graphic characteristics of digital media, their social contexts and trends, orientation, as well as economic and cultural significance; - - the ability to assess the quality, appropriateness, completeness, effectiveness, and adequacy of information and directly the source of information for a specific purpose or policy of the organization (including authority and timeliness of information); - - demonstration of the ability to analyze (comparison, contrast, summary), interpret and highlight information from many sources, which is collected using quality management tools from the conditions of further development of the organization

Conclusions. The article examines the etymology of the term "cyberterrorism" in historical retrospect. The main stages of training of cyber security specialists in different countries of the world were studied and the main competencies possessed by persons who commit cyber-terrorist crimes were analyzed. The main competencies that graduates of the College of Law, Jadara University should possess in order to counter cyber-terrorist threats have been clarified. Four groups of respondents were surveyed: students, their parents, college employees, and employers regarding the core competencies that college graduates should possess. The author's view on the need to introduce new disciplines for students studying cyberterrorism and countering it is offered. We believe that the proposed changes will allow the College of Law, Jadara University to acquire the image of a center for combating cyberterrorism.

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PROFESSIONAL TRAINING OF THE MODERN TEACHER IN THE CONDITIONS OF DISTANCE EDUCATION

Oksana Bialyk[1], Vitalii Honcharuk[2]

[1]Doctor of Pedagogical Sciences, Professor, Professor of the Department of Pedagogy and Educational Management of Uman State Pedagogical University named after Pavlo Tychyna, Uman, Ukraine, e-mail: byalikov@gmail.com, ORCID: http://orcid.org/0000-0001-8200-6358

[2]Ph.D. (Pedagogical Sciences), Senior Lecturer at the Department of Chemistry, Ecology and Relevant Teaching Methodologies, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: gvitalii1975@gmail.com, ORCID: https://orcid.org/0000-0002-3977-3612

Abstract. *The article reveals the specifics of the organizationdistance learning as an innovative form of professional training of a modern teacher. It was established that modern distance education is an extensive system of knowledge transfer at a distance using various means and technologies, which helps students obtain the necessary information for use in practical activities, while distance learning is a form of organization of the educational process and pedagogical technology, the basis of which is a controlled independent student work and wide application of modern information and communication technologies in education. Distance learning uses the following concepts: asynchronous / asynchronous modes; web resources of educational disciplines (programs), distance courses; distance learning web environment; distance form of education in higher education institutions. In the conditions of distance learning in higher education institutions, the use of modern technologies is provided, such as: information and communication technologies of distance learning – technologies for creating, storing, storing and accessing distance courses (electronic resources) of educational disciplines (programs), as well as ensuring the organization and support of educational process using specialized software and information and communication tools; psychological and pedagogical technologies of distance learning – a system of means, techniques, steps, the consistent implementation of which ensures the fulfillment of the tasks of education, education and personality development; distance learning technologies – a complex of educational technologies (in particular, psychological-pedagogical and information-communication) that provide an opportunity to implement the distance learning process. It has been established that distance learning can be implemented through the use of a distance form as a separate form of education; the use of distance learning technologies to provide education in various forms: institutional (full-time – day, evening; part-time, distance; online); individual (external; family or home; pedagogical patronage; workplace or production); dual.*

Keywords: *institution of higher education, distance learning, innovative forms of professional training of modern teachers, distance learning technologies.*

JEL Classification: A23, A29, I28

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Introduction. The global process of transition from an industrial to an information society, as well as quarantine conditions and military status in Ukraine, require significant changes in many spheres of state activity. First of all, this concerns the reform of the education system through the creation of a new system of information support for education and Ukraine's entry into the transcontinental computer information system.

The development of the educational system in Ukraine leads to the emergence of new opportunities for:

– updating the content of education and methods of teaching disciplines and spreading knowledge;

– expanding access to all levels of education, realizing the possibility of obtaining it for a large number of young people, including those who cannot study in higher education institutions according to traditional forms due to a lack of financial or physical opportunities, professional employment, distance from large cities, prestigious educational institutions, etc.;

– implementation of the system of continuous education "throughout life", including secondary, pre-university, higher and postgraduate education;

–individualization of education in mass education [5].

Distance education, the introduction of which in Ukraine was foreseen by the National Informatization Program, is being developed at a rapid pace to achieve the specified results.

Literature review. In recent decades, the scientific and methodological foundations of distance learning have been developing rapidly. The works of many foreign scientists – R. Delling, D. Keegan, M. Simonson, M. Moore, A. Clark, M. Thompson, etc. – are devoted to the problems of the development of distance education. and domestic ones – O. Andreev, G. Kozlakova, I. Kozubovska, V. Oliinyk and others. However, this problem needs systematization and generalization.

Aims. The purpose of the article is to find out the specifics of the organization distance learning as an innovative form of professional training of a modern teacher.

Methodology. The basis of the conducted research was the study of scientific works and practical studies on the issues of distance education. The methodological basis of the research was comparative and logical methods, methods of analysis and synthesis, as well as the method of generalization.

Results&Discussion. According to the Concept of the Development of Distance Education in Ukraine, modern distance education is an extensive system of knowledge transfer at a distance using various means and technologies, which helps students obtain the necessary information for use in practical activities [5]. Distance learning is a form of educational process organization and pedagogical technology, the basis of which is the controlled independent work of students and the wide use of modern information and communication technologies in education. The main goal of distance learning of students is to educate a personality who has the desire and ability to communicate, study and self-educate.

Note that at the current stage of education development in Ukraine, the problem of finding new, intensive forms of organization of the educational process is intensifying, which led to the integration of information technologies into education and formed a separate type of learning – distance learning.

According to the Regulation on distance learning, approved by the Order of the Ministry of Education and Science of Ukraine (2013); The Law of Ukraine «On Higher Education» (2014), the Law of Ukraine «On Education» (2017), the Regulation on the National Educational Electronic Platform (2018) in the Uman State Pedagogical University named after Pavel Tychyna, the Regulation on distance learning, which is a normative document regulates the organization of the distance learning process at the University.

Distance learning, according to the Regulation, is an individualized process of a person acquiring general and professional competences, organized by means of mediated interaction of remote participants of the educational process in a specialized environment that functions on the basis of modern psychological and pedagogical and information and communication technologies [6].

The purpose of distance learning is to provide higher educational institutions with educational services through the use of modern information and communication technologies in education in accordance with state standards of higher education; according to the programs of training citizens for admission to institutions of higher education, training foreign citizens and improving the qualifications of employees.

The tasks of distance learning at the University include ensuring equal opportunities for citizens in realizing their constitutional right to education, assignment and improvement of professional qualifications, regardless of gender, race, nationality, social and property status, type and nature of occupations, worldview beliefs, party affiliation, attitude to religion, creed, state of health, place of residence and taking into account their abilities.

Based on the Regulation on distance learning, terms and concepts are used in the following meanings:

– asynchronous mode involves interaction between subjects of distance learning, during which participants interact with each other with a time delay, using e-mail, forum, social networks, etc.;

– web resources of educational disciplines (programs), distance courses are presented as a systematic collection of information and educational and methodical tools necessary for mastering educational disciplines (programs) and accessible via the Internet (local network) using a web browser and/or other software means;

– distance learning web environment is defined as a systemically organized set of web resources of educational disciplines (programs), software for managing web resources, means of interaction between distance learning subjects and distance learning management;

– the distance form of education is interpreted as a form of organization of the educational process at the University, which ensures the implementation of distance education and provides for the possibility for graduates to receive documents of the state standard on obtaining the corresponding educational degree.

In the conditions of distance learning in the ZVO, the use of modern technologies is provided, such as:

– distance learning information and communication technologies –technologies for creating, storing, storing and accessing distance courses (electronic resources) of educational disciplines (programs), as well as ensuring the organization and support of the educational process using specialized software and information and communication means;

– psychological and pedagogical technologies of distance learning – a system of means, techniques, steps, the consistent implementation of which ensures the fulfillment of the tasks of education, education and personality development;

– distance learning technologies – a complex of educational technologies (in particular, psychological-pedagogical and information-communication) that provide an opportunity to implement the process of distance learning at the University.

According to the Regulation on distance learning, the synchronous mode, as the most appropriate, involves interaction between subjects of distance learning, during which all participants of the educational process are simultaneously in the web environment of distance learning (chat, audio, video conferences, social networks, etc.), that is, the synchronous format involves the cooperation of distance learning subjects in real time.

In turn, «subjects of distance learning» are understood by us as persons who study (student, trainee), and persons who provide the educational process in the conditions of distance learning (pedagogical and scientific-pedagogical workers, methodologists, etc.) [6].

Understanding the above, the quarantine conditions and the conditions of the state of war in which Ukraine is, prompt the improvement of the distance learning system, which is understood as a set of software for creating, saving, and accumulating distance courses, designed for the organization of the educational process and monitoring of learning via the Internet and /or local network, and also provides authorized access of distance learning subjects to training courses.

Distance learning can be implemented through:

– application of distance education as a separate form of education;

– the use of distance learning technologies to provide education in various forms: institutional (full-time – day, evening; part-time, distance; online); individual (external; family or home; pedagogical patronage; workplace or production); dual

In the conditions of distance learning, special attention should be paid to the peculiarities of the organization of the educational process in higher education institutions, which is carried out in the following forms: independent work; educational classes; practical training; control measures.

The main form of organization of the educational process in the conditions of distance learning is independent work, while the main types of training classes in such conditions are: lecture, seminar, practical classes, laboratory classes, consultations, etc.

Lectures, consultations, and seminars are held with students of higher education remotely in synchronous or asynchronous mode according to the curriculum and class schedule. Obtaining educational materials, communication between subjects of distance learning during educational classes organized remotely, can be provided through the provision of video, audio, graphic and text information in synchronous or asynchronous mode.

A practical lesson, which involves the student performing practical (control) works, can be conducted remotely in asynchronous mode. Individual practical tasks can be performed in synchronous mode, if this is provided by the work program of the academic discipline.

Laboratory classes should be organized face-to-face in specially equipped educational laboratories or remotely using virtual simulators and laboratories. As for

other types of training sessions (business games, debates, discussions, implementation of projects in groups, etc.), they can be conducted face-to-face or remotely in synchronous or asynchronous mode according to the work program of the academic discipline.

Control measures in the academic discipline include intermediate (thematic, modular), final and other controls of students' educational achievements. All control measures at the University are organized remotely or face-to-face using the capabilities of information and communication technologies, in particular video conference communication, provided authentication of the student is ensured.

The organization of the educational process at the Uman State Pedagogical University is carried out using distance learning technologies for methodical and didactic support of independent work, control measures, as well as during training sessions using the Moodle platform (Modular Object Oriented Distance Learning Environment) – a system of software products CLMS (Content Learning Management System), the distribution of which is freely distributed according to the principles of the Open Source license. With the help of this system via the Internet (dls.udpu.edu.ua), the student has the opportunity to familiarize himself with the educational material, which is presented in the form of various information resources (text, video, animation, presentation, electronic manual), complete the task and send it for verification , pass testing, etc. The instructor can independently create e-courses and conduct training, send messages to students, assign and check assignments, keep electronic grade logs, configure various course resources, and more. With the help of distance learning technologies and the Moodle platform, the University carries out internal monitoring of ensuring the quality of educational activities and the quality of higher education.

It is worth noting that access to the University's distance learning system resources is personalized. Participants of the educational process receive a login and password for entering the system after registering in it. Each SDN user has access only to those electronic training courses for which he is registered to participate in the educational process. SDN users are personally responsible for the confidentiality of the storage of logins and passwords. The administration and support of the Moodle system at the University is provided by the technical staff of the information and computing center and the distance learning center.

Scientific and methodological support for distance learning includes:

– methodical (theoretical and practical) recommendations for the development and use of pedagogical-psychological and information-communication technologies of distance learning;

– criteria, means and quality control systems of distance learning;

– meaningful, didactic and methodical content of web resources (distance courses) of the curriculum/educational program of the specialty.

Pedagogical, scientific-pedagogical workers and methodologists who participate in the organization of distance learning must systematically improve their qualifications for high-quality organization and sufficient mastery of distance learning technologies.

When organizing distance learning, the University has the appropriate hardware and software:

– hardware (personal computers, network equipment, servers, equipment for video conferencing, etc.) that ensure the development and use of web resources for educational purposes, management of the educational process and the necessary types of interaction between subjects of distance learning in synchronous and asynchronous modes;

– information and communication support with channel bandwidth to provide all subjects of distance learning round-the-clock access to web resources and web services and the implementation of the educational process in synchronous and asynchronous modes;

– software of general and special purpose (in particular for persons with special needs), which is licensed or built on software products with open codes.

The main areas of international cooperation in the field of distance learning for the University are:

– participation in projects and programs aimed at the entry of Ukraine's distance learning system into the world education system, taking into account national interests and achievements of domestic education, in particular, the creation of international virtual universities, which include educational institutions of different countries;

– conducting joint scientific research aimed at the development of distance learning;

– provision of services related to obtaining an education using distance learning technologies to foreign citizens, etc.

At the same time, considering the features of distance learning as an innovative form of professional training of a modern teacher, we focus on its advantages compared to traditional forms (full-time and part-time), such as: continuity of learning - the ability to learn at any time according to an individual schedule; accessibility – the openness of educational resources for the mass involvement of all segments of the population in the educational process; economy – the provision of quality education with minimal financial and energy costs; individualization and differentiation of training – creation and adjustment of distance courses taking into account the age and physiological characteristics of the user; innovativeness – the use of new information and communication means of learning to create a high-quality educational environment for the purpose of forming and developing skills not only in specialized fields, but also acquiring computer literacy; mobility – the opportunity to study in another direction in parallel, as well as without breaking away from professional activity.

In modern conditions, flexibility and a wide toolkit of distance education make it possible to use such technologies in the face-to-face form of education (checking tasks, monitoring the level of mastery of skills and abilities), in combination with the extramural form (on-line consultations, teleconferences), as well as as a separate type of training organization (web course, training). With the use of the latest tools, all

necessary educational resources (textbooks, manuals, didactic material, pedagogical software, etc.) are stored in a single accessible cloud storage.

However, the use of distance education has some disadvantages that must be eliminated, if possible, in one way or another: the incompetence of some teachers in the matter of organizing distance education with the use of new information and communication technologies; the difficulty of controlling the independence of tasks; the difficulty of motivating and controlling the timeliness of tasks due to the allocation of most of the educational material for independent processing; the difficulty of organizing joint activities for the purpose of communication and exchange of experience, etc.

With the distance form of education, certain communication limitations must also be taken into account: a certain isolation of the student in a virtual academic group; restrictions that prevent the development of group communication, group unity; technical means of group communication activity of the teacher and student create an artificial and inferior, in the traditional sense, communicative space; inability to accurately and clearly express your thoughts, especially in chats and short messages; difficulties in short formulating and succinctly arguing one's position during the educational process, especially in chats and video conferences.

Conclusions. The goal of implementing distance learning in higher education institutions during the period of quarantine measures and the war in Ukraine is the organization of a high-quality educational process «at a distance» with the use of the latest information and communication tools and open access to educational resources. It is this form of education that can quickly adapt to the requirements of the information society and qualitatively prepare the future teacher. In combination with traditional forms (under a mixed system of education), distance education in a higher education institution can provide a wide range of educational services both for applicants and students to acquire the necessary skills and abilities for future professional activities, and for teachers to improve their qualifications.

Author contributions. The authors contributed equally.

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USE OF EDUCATIONAL TRAINING IN THE PROFESSIONAL TRAINING OF FUTURE BIOLOGY TEACHERS IN THE STUDY OF HUMAN AND ANIMAL ANATOMY AND PHYSIOLOGY

Svitlana Sorokina[1], Liubov Sobolenko[2], Lesia Moroz[3]

[1]Ph.D. (Biological Sciences), Associate Professor, Associate Professor of the Department of Biology and Methods of its Teaching, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: s.i.sorokina@ukr.net, ORCID: https://orcid.org/0000-0001-8155-001X

[2]Ph.D. (Biological Sciences), Associate Professor, Associate Professor of the Department of Biology and Methods of its Teaching, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: sobolenko@ukr.net, ORCID: https://orcid.org/0000-0003-1196-4772

[3]Ph.D. (Biological Sciences), Associate Professor, Associate Professor of the Department of Biology and Methods of its Teaching, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: lesamistrukova72@qmail.com, ORCID: https://orcid.org/0000-0002-2007-5443

Abstract. *The prospective and effective area of training is the use of training in the educational process for students of natural sciences. The relevance of introducing training technologies into the educational process for the study of human and animal anatomy and physiology by future biology teachers is emphasized. The latest domestic and foreign scientific researches and publications on the use of training technologies in the educational process are analyzed. The features of the use of training in the training of future specialists in a higher educational institution are characterized. It is shown that the training technology is a collective form of organization of training, helps to carry out training taking into account individual characteristics, promotes self-realization of the future professional and the choice of an adequate pace of learning. The expediency of using the training in the training of biology teachers in the development of certain aspects of the disciplines of human anatomy and physiology, namely: reproductive health, methods of contraception, rational nutrition, hardening, healthy lifestyle, is determined. A plan of training sessions for the cycle is proposed: «Show Awareness and Prudence», their topics and goals are defined. The questionnaire survey of higher education students of the Faculty of Natural Sciences and Geography of Pavlo Tychyna Uman State Pedagogical University, which took place before and after the training sessions on the following topics, was analyzed: «Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS)», «Sexually Transmitted Infections (STIs)». The effectiveness of the training in the educational activities of future biology teachers was evaluated. We consider it promising to introduce training technologies for the training of a biologist during higher education at the university.*

Keywords: *training, students of higher education, biology teacher, educational process, training courses, hard skills, soft skills.*

JEL Classification: A23, A29, I28

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Introduction. The peculiarity of the current moment in Ukrainian education lies in the particularly urgent need to improve it. This is possible only if the forms, methods, and technologies of training are updated. It is well known that interactive technologies are the most effective technologies for acquiring knowledge, forming skills, developing life and professional skills, and acquiring certain competencies. That is why the introduction of various forms and methods of interactive learning based on the principles of activity, trust, interaction, equality of participants in the educational process, reliance on collective experience and mandatory feedback is an urgent requirement of the time. A promising and effective area of training is the use of training in the educational process for higher education students majoring in

biology. However, there is no holistic view of how to use training to form a competent biology teacher. Therefore, the issues related to the organization of training courses in the study of biological disciplines as a means of developing a professionally oriented specialist are of particular relevance.

Literature review. A number of researchers emphasize the relevance of introducing training technologies into the educational process to study biological aspects in the training of higher education applicants (Skiba, 2016: 124- 129; Tsurul, 2017: 130-140; da Silva, 2020, Guidarelli, 2015), and some scholars emphasize the expediency of lifelong learning through training (Mampane, 2017).

Training, which means «to teach, train», is simultaneously – an interesting process of learning about oneself and others; communication; an effective form of knowledge acquisition; a tool for developing skills; a form of experience expansion. During the training, informal, relaxed communication is created, which opens up many options for the group to develop and solve the problem for which it has gathered. As a rule, participants are delighted with training methods because they make the learning process not burdensome (Technologies..., 2006).

Training has a fairly wide and successful range of applications in various fields of science: psychology, sociology, pedagogy, economics, biology, medicine, etc. In general terms, training is considered as a systematically implemented program of various exercises, the main purpose of which is to increase the interest of the individual in the process of mastering certain practical skills and acquiring competencies to solve various problems, finding ways out of difficult situations, overcoming certain vital problems, etc. (Pedagogical ..., 2003).

The wide range of applications of training courses gives rise to a significant number of definitions of its concept, among which we note domestic authors.

V. Busel characterizes training as a method of influencing a personality in order to increase the effectiveness of human interaction with society (Velykyi ..., 2005).

C. Makshanov believes that training is a multifunctional method of targeted changes in the psychological phenotypes of a person, group or organization in order to harmonize professional and personal existence (Miliutina, 2004).

A. Semenova notes that "training is an organizational form of educational work that, based on the experience and knowledge of its participants, ensures the effective use of various pedagogical methods, by creating a positive emotional atmosphere in the group, and is aimed at obtaining the skills and life competencies" (Semenova, 2006).

Conducting a training session or its elements remains a non-traditional form of teaching and is quite difficult to prepare and conduct, as it requires certain skills of the teacher. In the course of its implementation, the teacher should also create conditions for multilevel communication for all participants of the class (Training ..., 2018).

H. Romanova, characterizing the features of training education of future specialists in a higher education institution, argues that the use of training education can be represented by three stages: The first stage identifies, actualizes, and stimulates specific skills (for this purpose, special exercises are conducted to get to

know each other and activate participants to develop communication skills in the group); the second stage is aimed at practicing various skills (for this purpose, participants of training sessions are observed, various practical tasks are introduced, and feedback is received from the trainer, as well as evaluating the results of the training with a mandatory discussion of the expectations of the participants that they expressed before the training); The third stage is defined as the stage of promoting and supporting the acquired skills (during this stage, conditions and opportunities are created for individual practice, self-development, self-improvement, and the formation of the necessary positive skills) (Romanova et al., 2013: 177-185).

O. Kocherha's research on the peculiarities of using training technologies in the process of forming the practical component of future teachers' professional training has shown that during the training, participants have the opportunity to practice, experiment, model the situation, check their conclusions, analyze their achievements, polish their communication skills and their own behavior. This allows them to avoid mistakes in real life, helps them to make better decisions faster and overcome difficulties in their future professional activities (Кочерга, 2014: 116-119).

There are so-called hard skills and soft skills training courses (Laker et al., 2011). Hard skills training is characterized as having a highly specialized focus. In contrast, soft skills training courses have a greater interpersonal focus (Jayaram et al., 2017).

O. Fischuk considers training to be the best method for developing highly specialized professional skills (hard skills) and interpersonal skills (soft skills) for a higher education student majoring in biology (Fischuk, 2020: 148-161).

Although training technologies are actively used to develop skills and competencies in the field of health (Antonova et al., 2016; Vashchenko, 2005; Vorontsova et al., 2012; Concept of ..., 2005;. Polischuk, 2012), but the use of training in biology teacher training in the study of human anatomy and physiology remains poorly understood.

Aims. The aim of the article is to carry out a theoretical analysis of the peculiarities of using training in the process of training a biology teacher in the study of human anatomy and physiology.

Methodology. Educational and scientific-methodical literature, modern publications on the problem became the information base of the conducted research. The research used comparative-historical and logical methods, analysis and synthesis, as well as the generalization method.

Results&Discussion. It should be noted that the training form of work in biology teacher training remains poorly studied and not sufficiently widespread in the educational process of higher education institutions in Ukraine. The development of the content and procedure for conducting a training session requires the teacher to have skills not only in the field of specialized disciplines, but also implementation abilities in the field of pedagogy and psychology, the ability to apply non-standard approaches in the training of biology teachers.

Among the conditions for improving the professional development of biology teachers, professionals (Weilande, 2008) consider the achievement of results not

through differentiation of training, but as a process of modeling conditions, i.e. the use of new and adaptation of traditional teaching technologies to the individual and professional needs of the higher education student, active use of individual and group forms of work during professional training. In this case, the training technology is a collective form of training organization, helps to carry out training taking into account individual characteristics, promotes self-realization of the future professional and the choice of an adequate pace of learning.

Formation of biology teachers' readiness to implement training forms in their professional activities should begin when they are obtaining higher education. It is advisable to use the training for the disciplines of human anatomy and physiology when working on certain aspects of the following topics: reproductive health, contraceptive methods, rational nutrition, hardening, healthy lifestyle and future educational work.

According to the training technology, it is appropriate to organize training courses for future teachers on the prevention of HIV, AIDS, and STIs precisely because Ukraine lacks a comprehensive policy for preventing these diseases among the population.

Based on the literature reviewed, we offer the following plan for the training sessions of the cycle as one of the options: «Show awareness and prudence» aimed at preparing young people to understand that HIV, AIDS, STIs (sexually transmitted infections), and unplanned pregnancy are behavioral complications that can be prevented by developing their own responsible behavior skills; to provide young people with information about gender, sexual relations and psychophysiological changes associated with puberty; to focus the attention of participants on the physiological characteristics of puberty; to familiarize girls and boys with the ways of spreading and consequences of HIV, AIDS and STIs; to form in young people an understanding of their own responsibility for the risk of HIV and STI infection and unplanned pregnancy; to promote changes in the motivation of sexual behavior of girls and boys, increase their self-awareness in favor of reproductive health and individual protection against HIV, AIDS, and STIs; to form a tolerant attitude towards HIV-infected people among young people; to provide practical recommendations to higher education students, future biology teachers, on organizing educational work on safe behavior.

The training course will cover the following topics over the course of 12 hours: «Gender and Sexual Relations», «Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS)», Sexually Transmitted Infections (STIs)», «Risky Behavior», «Formation of Responsible Safe Behavior». Key concepts to learn: gender, sexual relations, sexuality; HIV/AIDS, ways of HIV transmission; STIs; risk levels; risky behavior, responsible behavior.

To determine the effectiveness of this form of work, we conducted a survey of the training participants (56 people in total), who are students of the Faculty of Natural Sciences and Geography of Pavlo Tychyna Uman State Pedagogical University.

The training participants were selected based on their professional specialization, as biology teachers are usually expected to conduct educational work to increase motivation for a healthy lifestyle.

The survey was conducted before and after the training sessions: «Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS)», «Sexually Transmitted Infections (STIs)».

The questions of the questionnaire were grouped into several blocks, which determined the main directions of analysis of the research material, namely age of sexual debut and the presence of systematic sexual intercourse; level, age, sources of awareness of the training participants in the concepts of HIV, AIDS, STIs; level of awareness of the appearance, manifestations, methods of infection, spread and responsibility for the spread of HIV, AIDS, STIs; predicted behavioral model in case of HIV, AIDS, STIs; assessment of the use of training in professional activities.

The results of the survey show that the average age of sexual debut (17-18 years, 65%) and regular sexual intercourse (37%) among respondents correspond to the average data in Ukraine. All training participants are familiar with the concepts of HIV, AIDS, and STIs. The average age of receiving information for them is 11-14 years (55%), while 32% of respondents were familiar with them before the age of 10, and the rest (13%) received information about HIV, AIDS, STIs after the age of 15. In our opinion, it is positive that 66% of respondents received it in the process of studying, among the rest: 4% - from parents, 5% - from doctors, 10% - from the media, the remaining 15% - do not remember; 57% of participants received it from teachers, 16% - from literature, 10% - from doctors, 17% - from other sources, which indicates a fairly high role of educational activities of schools and the media.

In terms of awareness of the emergence, manifestations, modes of infection, spread and responsibility for the spread of HIV, AIDS and STIs, the training participants show a fairly high level of awareness, but there is a clear trend towards an increase in its level after the training sessions. When analyzing the predicted behavioral model in case of HIV, AIDS, STI infection, we consider positive the respondents' awareness of the independence of the possibility of infection from any factors (gender, education, nationality, social status, etc.) and the consequences of not receiving treatment for these diseases (93% and 79%, respectively). It is encouraging that 46% and 43% of young people believe it is possible to turn to their parents and doctors in case of a problem, and 55% and 21% of respondents plan to discuss these issues with health care workers and family members, as timely treatment can be quite effective or limit the spread of the disease. Given the age of respondents and their rather limited life experience, we hope that 52% of respondents will not change their answer to the question about tolerant attitude towards people living with HIV, AIDS and STIs.

When asked to assess the use of training in their professional activities, all respondents gave highly positive answers: 86% consider this form of training to be appropriate; 95% are willing to use it in their professional activities; 88% believe that this form of work, given the accessibility of information, should be used in other areas for the comprehensive development of young people.

Conclusions. Thus, the use of training technology in the preparation of biology teachers in the study of human anatomy and physiology contributes not only to the intensity of learning, but also helps to create qualities that are important for the formation of a future specialist, to form new professional skills, and involves the development of creative thinking and intellectual abilities of the individual. A biology teacher should be ready to implement training technologies in their professional activities after obtaining a university degree.

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IMPLEMENTATION OF INTERACTIVE METHODS LEARNING IN THEORETICAL ENGLISH GRAMMAR CLASSES

Alla Paladieva[1], Viktoriya Pavlyuk[2], Galyna Bondar[3], Vitalii Honcharuk[4]

[1]Ph.D. (Pedagogical Sciences), Associate Professor of the Department of Theory and Practice of foreign languages, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: alla-paladieva@ukr.net, ORCID: https://orcid.org/0000-0002-8182-679X

[2]Ph.D. (Pedagogical Sciences), Associate Professor of the Department of Foreign Languages, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: vika.pavlyuk83@gmail.com, ORCID: https://orcid.org/0000-0002-9612-2218

[3]Ph.D. (Pedagogical Sciences), Associate Professor of the Department of Foreign Languages, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: galyna72bondar@gmail.com, ORCID: https://orcid.org/0000-0002-7321-8137

[4]Ph.D. (Pedagogical Sciences), Senior Lecturer at the Department of Chemistry, Ecology and Relevant, Teaching Methodologies, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine, e-mail: gvitalii1975@gmail.com, ORCID: https://orcid.org/0000-0002-3977-3612

Abstract. *Nowadays, in the educational process of a higher education institution, it is necessary to use modern psychological and pedagogical technologies, which provide for the maximum intensification of the education of a student of higher education, because under the condition of his active activity, what he has learned can become an asset of his mind and personal qualities. The purpose of the article is to analyze the most effective interactive teaching methods and implement them in the teaching process of the discipline "Theoretical English Grammar". The article presents an overview of interactive learning methods and educational technologies that can be implemented in the process of studying the specified professional discipline. With active learning, the student of higher education acts as a subject of educational activity to a greater extent than with passive learning, enters into a dialogue with the teacher, takes an active part in the cognitive process, performing creative, searching, problem tasks. Active learning methods have a number of advantages, they allow to activate the learning process, the ability to put forward and formulate ideas; willingness to take justified risks and make non-standard decisions. The teacher acts as an organizer of the learning process, a group leader, a facilitator, and a creator of conditions for the initiative of those seeking higher education. Learning using interactive educational technologies involves a different from the usual logic of the educational process: not from theory to practice, but from the formation of new experience to its theoretical understanding through application. Under the condition of regular use of forms and methods of interactive learning, students of higher education develop productive approaches to mastering information, the fear of making an incorrect assumption disappears. Interactive training increases the motivation of participants in solving the discussed problems, which gives an emotional impetus to their further search activity, prompts them to take specific actions. Possibilities and practical significance of using the specified methods in the system of higher professional education are considered. The use of interactive teaching methods, which include new methods of "teacher-student" interaction, are considered, and innovations in the process of mastering educational material are identified. Both practical classes and lectures can be conducted in an interactive form (problem lecture, lecture-dialogue, lecture-provocation, lecture in pairs and others). The educational process with the use of interactive technologies and methods allows students of higher education to form social interaction, lively communication, and joint decision-making.*

Keywords: *interactive technologies, active learning methods, professional education, psychological and pedagogical technologies, theoretical English grammar.*

JEL Classification: A23, A29, I28

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Introduction. The turn of pedagogical consciousness from thinking about traditional methods to pedagogical technologies increases its purposefulness,

systematicity, business efficiency and gives a complex result. Nowadays, many intensive pedagogical technologies have been developed and improved. The educational process in the institution of higher education should be built on the basis of modern intensive psychological and pedagogical technologies, which include the maximum intensification of student learning. Without his own active activity of the student of higher education, nothing can become the property of his mind and personal qualities. That is, one of the factors in the formation of a future professional is the active position of the student of higher education during his studies - purposefulness, activity, diligence, responsibility, will, self-demanding, the desire to make the content of education the property of his consciousness. For this, it is necessary that in the class every learner wants to learn everything he is taught, be psychologically active, try hard and work hard, that is, be in a state of readiness to master the educational material from the beginning to the end of the class. A lot depends on the features of the class in which he is present: its content, organization, methodology, teacher's actions. Therefore, the involvement of interactive technologies in the educational process requires special attention and careful study.

Literature review. The development of elements of interactive learning can be found in the works of V. Sukhomlynskyi, Sh. Amonashvili, V. Shatalov, Ye. Ilyin, S. Lisenkovoch and other innovative teachers who worked mainly with students. However, in Soviet times, the creativity of individual teachers was more the exception than the rule, and in the field of higher education didactics, innovative methodological searches were episodic. Regarding scientists who deal with the problem of interactive technologies, you can refer to the works authored by O. Pometun, L. Pyrozhenko, and V. Kondratyuk.

In pedagogical science, various aspects of the given problem were studied: activation of cognitive activity of students of higher education [1; 2]; formation of subjectivity of the future teacher in the educational realities of Ukraine [3]. Researchers addressed the issues of innovative competence of the teacher [4], communicative competence of the future philologist [5]; considered project-based learning in the process of training a future philologist [6].

Aims. The aim of the article is to analyze the most effective interactive teaching methods and implement them in the teaching process of the discipline "Theoretical English Grammar".

Methodology. The study used the analysis of educational, scientific and methodical literature, modern publications on the problem. Also used comparative-historical and logical methods. Comparatively-historical method of scientific knowledge is used only where the history of the object becomes the subject of research in one way or another. The logical method is a reflection of the process in an abstract and theoretically consistent form.

Results. The educational standards of higher professional education of the third generation radically changed the orientations of the domestic education system. Instead of traditional and familiar knowledge, abilities and skills that are familiar to all teachers, competences were brought to the fore. Competence is "the ability to do something well or efficiently", "the ability to perform special work functions" [7].

"Usage" is an actual manifestation of competence as "hidden", potential. Changing the vector of the educational process, based on knowledge, to a practice-oriented approach to the results of the educational process, inevitably led to the problem of technologies and methods of learning, which will achieve this practice-orientation.

Active and interactive forms and methods of learning play a primary role in achieving the set goals [8, p. 21]. During active learning, the student acts as a subject of educational activity to a greater extent than during passive learning, enters into a dialogue with the teacher, takes an active part in the cognitive process, performing creative, searching, problem tasks. Active learning methods allow you to successfully form: the ability to adapt in a group; the ability to establish personal contacts; exchange information, willingness to take responsibility for the group's activities; the ability to propose and formulate ideas, projects; willingness to take justified risks and make non-standard decisions; the ability to avoid repeating mistakes and miscalculations; the ability to express one's thoughts clearly and convincingly, to be concise, but understandable; the ability to predict the consequences of the steps taken; the ability to effectively manage one's activities and time [9, p. 12].

Interactive methods (from the English interaction – interaction, influence on each other) – methods of learning based on the interaction of learning with each other. Interactive learning is: learning technology is a way of implementing the content of learning provided by educational programs, which represents a system of forms, methods and means of learning that ensures the most effective achievement of the set goals. A teaching method is a way of achieving some goal, solving a specific problem. Education built on the interaction of the student with the educational environment, the educational environment, which serves as a field of learned experience"; "education based on the psychology of human relationships and interactions"; "learning, which is understood as a joint process of cognition, where knowledge is acquired in joint activity through dialogue, polylogue."

Interactive teaching methods are most consistent with a person-oriented approach, as they involve co-learning (collective, cooperative learning), and both the teacher and the student are subjects of the learning process. The teacher often acts only as an organizer of the learning process, group leader, facilitator, creator of conditions for student initiative. Interactive learning is based on students' own experience, their direct interaction with the field of professional experience. Learning using interactive educational technologies involves a different from the usual logic of the educational process: not from theory to practice, but from the formation of new experience to its theoretical understanding through application. If the forms and methods of interactive learning are used regularly, students develop productive approaches to mastering information, the fear of making an incorrect assumption disappears (since a mistake does not entail a negative evaluation), and trust relations with the teacher are established. Interactive training increases the motivation and involvement of the participants in solving the discussed problems, which gives an emotional impetus to the further search activity of the participants, prompts them to specific actions, the learning process becomes more meaningful. Interactive learning forms the ability to think out of the ordinary, to see a problematic situation in one's

own way, ways out of it; to justify their positions, develops such features as the ability to listen to another point of view, the ability to cooperate, enter into partner communication, while showing tolerance and benevolence towards one's opponents [7, p. 42].

Interactive learning methods allow you to transfer the methods of organizing activities, to gain new experience in activities, their organization, communication, and experiences. Interactive activity provides not only an increase in knowledge, abilities, skills, methods of activity and communication, but also the discovery of new opportunities for students, is a necessary condition for the formation and improvement of competencies through the inclusion of participants in the educational process in a meaningful experience of individual and collective activities for the accumulation of experience, awareness and acceptance of values.

The use of interactive learning technologies allows for more flexible and humane monitoring of knowledge acquisition and the ability to apply acquired knowledge, skills and abilities in various situations.

The result for a specific student: the experience of actively mastering the educational content in interaction with the educational environment; development of personal reflection; mastering a new experience of educational interaction, experiences; development of tolerance. Result for the educational microgroup: development of communication and interaction skills in a small group; formation of value-oriented unity of the group; encouragement to flexibly change social roles depending on the situation; adoption of moral norms and rules of joint activity; development of analysis and introspection skills in the process of group reflection; development of the ability to resolve conflicts, the ability to compromise [10, p. 26].

The result for the "teacher – group" system: a non-standard attitude to the organization of the educational process; multidimensional learning of educational material; formation of motivational readiness for interpersonal interaction not only in educational, but also in extracurricular situations. Both practical (seminar) classes and lectures can be held interactively. Among the latter, for example, the following can be highlighted: problematic lecture. The teacher creates problematic situations at the beginning and during the presentation of the educational material and involves the students in their analysis. Allowing for the contradictions inherent in problem situations, students can independently come to those conclusions that the teacher must communicate as new knowledge. Lecture with planned mistakes (provocation lecture).

After announcing the topic of the lecture, the teacher announces that a certain number of errors of various types will be made in it: substantive, methodical, behavioral, etc. [11, p. 43]. At the end of the lecture, students must name the mistakes. A two-part lecture is the work of two teachers who deliver a lecture on the same topic, interacting both with each other and with the audience. In the dialogue between the teachers and the audience, the problem is posed and the problem situation is analyzed, hypotheses are put forward, their refutation or proof, resolution of emerging contradictions, and the search for solutions are carried out. Lecture-visualization. In this type of lecture, the teacher's transfer of information to students is

accompanied by the display of various drawings, structural and logical diagrams, reference summaries, diagrams, etc. With the help of visual aids (slides, video recording, displays, interactive whiteboard, etc.). Lecture "press conference". The teacher asks students to ask him questions in writing for 2-3 minutes according to the announced topic of the lecture. Then, within 3-5 minutes, the teacher systematizes these questions after receiving them and starts lecturing, including the answers to the questions in its content. Lecture-dialogue. The content is presented through a series of questions that students must answer directly during the lecture. The variety of forms and methods of interactive learning does not allow us to give a detailed description of each of them. Therefore, only the most general and frequently used methods and technologies of interactive learning will be considered further.

Discussion. Discussion (from the Latin discussion – consideration, research) is a public discussion or free verbal exchange of knowledge, judgments, ideas, opinions about any controversial issue or problem. Its essential features are a combination of complementary dialogue and discussion-dispute, a clash of different points of view and positions. In comparison with the lecture-seminar form of education common in education, the discussion has a number of advantages. Discussion ensures active, deep, personal assimilation of knowledge. Although a lecture is a more economical way of imparting knowledge, a discussion can have a much more long-term effect [12, p. 56]. An active, interested, emotional discussion leads to meaningful assimilation of new knowledge, can make a person think, change or revise his attitudes. Active interaction is carried out during the discussion. The discussion provides a view of how well the group understands the issues discussed and does not require the use of more formal assessment methods. The discussion method helps to solve the following tasks: training the participants in the analysis of real situations, as well as forming the skills of separating the important from the secondary and formulating the problem; simulation of particularly difficult situations, when even the most capable student is unable to cover all aspects of the problem alone; formation of the ability to critically evaluate and defend one's beliefs. Brainstorming is the freest form of discussion, a good way to quickly involve all group members in the work based on free expression of their thoughts on a given issue. It is used for the collective solution of problems in the development of specific projects, which involves the generation of various ideas in a group, their selection and critical evaluation [12, p. 53].

Conclusion. The content of the specialist's training should not be limited to the subject content, which ensures only his professional competence. A social context is also necessary, which presupposes the presence of the skills of social interaction and communication, joint decision-making, etc. The social context of the future professional activity is determined by humanistic conditions of study, democratic relations between the teacher and students, a creative atmosphere of interpersonal interaction and communication.

Interactive learning develops in students of higher education the abilities and skills of productive communication in the conditions of the educational process, the

ability to argue one's point of view, clearly formulate and present one's thoughts, and analyze complex linguistic phenomena.

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