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Se intercambia con otras revistas de carácter científico.

Contenido

DE LOS FINES Y PROPÓSITOS DE EDUWEB, REVISTA DE TECNOLOGÍA DE INFORMACIÓN Y COMUNICACIÓN EN EDUCACIÓN

Eduweb, la revista de Tecnología de Información y Comunicación en Educación, es una publicación de carácter nacional e internacional de divulgación del conocimiento, del uso, aplicación y experiencias de las Tecnologías de la Información y Comunicación (TIC) en ambientes educativos. Con la revista se pretende divulgar las innovaciones que en materia de TIC están siendo implementadas y ensayadas en los diferentes niveles y modalidades del sistema educativo venezolano e iberoamericano. De igual manera contribuir a proyectar las experiencias de estudiantes de pre y postgrado, docentes, investigadores y especialistas en TIC en educación en la Universidad de Carabobo y en otras universidades de Venezuela y de otros países de Iberoamérica. Es una revista arbitrada e indexada adscrita al programa de la especialización en Tecnología de la Computación en Educación, de la Facultad de Ciencias de la Educación de la Universidad de Carabobo, registrada bajo el ISSN 1856-7576. Editada en formato impreso y digital.

Visión

Ser un espacio académico-científico de difusión y divulgación de las distintas tendencias del pensamiento universal ubicadas en el área de TIC en ambientes educativos, con altos niveles de calidad académica.

Misión

Promover y facilitar la difusión y divulgación de los productos de las investigaciones y experiencias de los docentes e investigadores de la Universidad de Carabobo y otras universidades del país y del mundo en el área de TIC en ambientes educativos; motivar la participación en redes comunes de información y publicación nacional e internacional; coordinar esfuerzos y velar por la calidad de las publicaciones a fin de procurar elevar el nivel académico del personal docente y de investigación mediante el desarrollo de trabajos de investigación como función esencial en su crecimiento académico.

Objetivos

Servir como órgano de divulgación de las TIC y su influencia en ambientes educativos. Estimular la producción intelectual no solo en los docentes e investigadores de la Universidad de Carabobo, sino también en otros centros de educación e investigación nacional e internacional.

Propiciar el intercambio cultural, académico, científico y tecnológico con otros centros de educación superior en Venezuela y el mundo.

CARTA DEL EDITOR

Se ha vuelto frecuente leer y escribir que el mundo atraviesa una crisis en todas sus dimensiones, por ende, nuestra sociedad experimenta momentos de incertidumbre que ponen al ser humano en contradicción con su anhelo de bienestar y sosiego. Sin embargo, estamos conscientes de asumir una actitud de reto frente a los incesantes cambios sociales y culturales tras el paso del tiempo. Claro está, prestando atención a las nuevas generaciones quienes tienen un entorno mucho más grande de información. Entendemos que juntos podemos intercambiar las experiencias que nos conduzcan a un futuro distinto al que se avizora.

Compartimos la preocupación y temor sobre la pandemia que forzó la virtualización, por ejemplo, en el sector de educación universitaria nos vimos en la abrupta necesidad de utilizar la tecnología para mantener el contacto con los estudiantes y puertas abiertas de un aula sin muros ni fronteras, es decir, la universidad se mantendría en su propósito de formar profesionales, investigar y formar ciudadanos. De allí que, suscribimos lo dicho por la UNESCO (2021) “como especie, estamos en el punto de nuestra historia colectiva donde tenemos el mayor acceso a conocimientos y herramientas que nos permitan colaborar. El potencial para involucrar a la humanidad en la creación de mejores futuros juntos nunca ha sido tan grande”. En calidad de medio difusor del conocimiento en la temática de educación, continuamos con la labor de exhortar a quienes se encuentran registrando sus experiencias investigativas a publicar sus resultados, reflexiones y propuestas cuyo impacto en el proceso de enseñanza y aprendizaje sea expuesto para la consulta, revisión y análisis de cada lector. Una enumeración de títulos para motivar el recorrido cognitivo por las páginas siguientes. Guías de aprendizaje en la formación docente para la incorporación de TIC en Educación Superior. La aplicación WhatsApp un recurso didáctico para la educación online. Implantación de programas CAD para mejorar la visión espacial de los estudiantes de secundaria. Coaching académico para el fortalecimiento de las habilidades directivas en instituciones del Distrito 09D02 Guayaquil-Ecuador, 2021. Perspectivas del diseño curricular en línea para la formación del docente en Educación Inicial. La publicación científica en docentes colombianos. Educación, tecnología y Covid-19: Usos de Internet con fines educativos de docentes y estudiantes universitarios durante la pandemia en Cañar-Ecuador. El eterno Mathitís y la purga para construir una vida con sentido. Covid-19. Estrategias en la Educación Universitaria pública. Finalmente, también podrán leer y consultar sobre este interesante trabajo: Instagram como un entorno virtual de aprendizaje complementario para fortalecer los procesos de enseñanza aprendizaje durante Pandemia.

Elsy Medina
Directora-Editora

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Challenges for scientific and pedagogical staff of universities after pandemia 2019

Desafíos para el personal científico y pedagógico de las universidades después de la pandemia 2019

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Abstract

Nowadays situation at the universities in Ukraine and all other countries round the world are faceted with different challenges almost every new quarter of the year. The very vivid example of it was the pandemic period, which determined transforming of forms of education and different approaches to education. Moreover, the Pandemia provoke the huge wave of challenges for scientific and pedagogical staff of universities. A great number of changes took place at the system of educational process organization: pandemic has exacerbated the need for digital, technology-enabled education experiences, new types of online-classes appared and new ways to scale them etc. But after pandemic period and all these transmitions in universities their appared the need for analyses of challenges which we are going to face with, when we come back to ordinary style of teaching? what problems are we going to solve? To answer these questions, we created a Questionnaire for teaching staff and students of different Universities in Ukraine in different regions. We asked them to give their feedbacks, opinions and feelings of the quarantine restrictions of COVID-19, what difficulties they had durining the next few months. The investigation helped to distinguish challenges to scientific and pedagogical staff of higher educational institutions, the nature of which is the peculiarities of the professional activities of teachers and challenges to the scientific and pedagogical staff of higher educational institutions, the nature of which are the features of the educational activities of students.

Keywords: Pandemic, scientific and pedagogical staff, higher education, challenges to university education.

Resumen

Hoy en día, la situación en las universidades de Ucrania y todos los demás países del mundo se enfrenta a diferentes desafíos casi cada nuevo trimestre del año. El ejemplo muy vívido de ello fue el período de la pandemia, que determinó la transformación de las formas de educación y los diferentes enfoques de la educación. Además, la Pandemia provoca la enorme ola de desafíos para el personal científico y pedagógico de las universidades. Se produjo una gran cantidad de cambios en el sistema de organización del proceso educativo: la pandemia ha exacerbado la necesidad de experiencias educativas digitales habilitadas por la tecnología, aparecieron nuevos tipos de clases en línea y nuevas formas de escalarlas, etc. ¿Pero después del período de pandemia y todas estas transmisiones en las universidades han hecho aparecer la necesidad de análisis de los desafíos a los que nos vamos a enfrentar, cuando volvamos al estilo ordinario de enseñanza? ¿Qué problemas vamos a resolver? Para responder a estas preguntas, creamos un cuestionario para el personal docente y los estudiantes de diferentes universidades de Ucrania en diferentes regiones. Les pedimos que den sus comentarios, opiniones y sentimientos sobre las restricciones de cuarentena de COVID-19, qué dificultades tuvieron durante los próximos meses. La investigación ayudó a distinguir los desafíos para el personal científico y pedagógico de las instituciones de educación superior, cuya naturaleza son las peculiaridades de las actividades

profesionales de los docentes y los desafíos para el personal científico y pedagógico de las instituciones de educación superior, cuya naturaleza son las características de las actividades educativas de los estudiantes.

Palabras clave: Pandemia, personal científico y pedagógico, educación superior, desafíos de la formación universitaria.

1. Introduction

The Covid-19 pandemic has posed significant challenges to the higher education community around the world. A special challenge for the higher education systems of different regions was the urgent and forced transition from full-time to distance learning, development and implementation of university online courses. The urgent imperative of “going online” caused by the Covid-19 pandemic (World Health Organization, (n. d.)) only added to the stress and psychological, pedagogical and physical strain felt by faculty and staff at the University, which according to Houston, Meyer, Beer and Veletianos (Houston, Meyer and Paewai, 2006) and before the pandemic tried to balance teaching, research and service responsibilities, not to mention the work-life balance.

The affected universities and institutions of higher learning, both public and private, had to look for the best alternative to ensure that teaching and coaching could continue uninterrupted, and online learning was the only route found suitable. Several crucial factors in implementing online learning also needed to be taken into consideration by management of these institutions, such as internet accessibility, speed, and time constraints faced by both educators and students (Yusuf & Ahmad, 2020). Scientific and pedagogical staff of domestic and foreign higher education institutions have faced a number of challenges related to the forced introduction of distance learning, as well as communication at different levels and different agents of the educational environment. However, even after the pandemic, the number of challenges will not decrease, as there will be a problem of reverse, gradual transition of the distance educational process of universities to full-time. Preliminary diagnostics of such calls is one of the means of comfortable return to the "off-line" mode. Actually, the research presented in this monograph is devoted to the definition of new challenges for scientific and pedagogical staff.

Scientific and pedagogical staff of different specialties, ages, status, regions had to prepare and conduct classes at home with all the practical and technical problems that accompany distance learning, and often without proper technical support. Thus, according to recent studies by Ukrainian scientists N. Melnyk, O. Kovtun, S. Hryniuk, I. Rohalska-Yablonska, I. Postolenko and I. Tovkach, among the barriers to the introduction of distance learning were identified: phasing and breadth of distance learning in the educational process, psychological unpreparedness, low methodological readiness to work in conditions of forced social distancing, insufficient competence of ICT (Melnyk, Kovtun, Postolenko, & Tovkach, 2020). After two weeks of quarantine, many universities

have already issued instructions, adopted regulations on distance learning in quarantine, and 30 % of teachers have already worked on various distance learning platforms. One and a half months later, most teachers, including the humanities, already used various video platforms, which showed almost 70% of teachers' adaptation to work in conditions of forced social distance (Melnyk, Kovtun, Postolenko, & Tovkach, 2020). Communication barriers during the pandemic of 2019–2020 turned out to be quite difficult to overcome difficulties, among which, according to a study by O. Kovtun, N. Melnyk, S. Hryniuk and I. Rogalska-Yablonska:

- communication barriers are related to perception through the screen (when the interlocutors show a lack of attention, interest, distraction or irrelevance for the recipient);
- communication barriers are related to differences in perception and point of view, physical disabilities, such as hearing or speech problems, language differences and difficulties in understanding unfamiliar accents;
- communication barriers can be provoked by emotional factors or differences in the cultural development of conversation partners, etc. (Kovtun, Melnyk, Grynyuk, & Rohalska-Yablonska, 2020).

According to research by M. Ocak and Ching (Ocak, 2011; Ching et al., 2018), the main difficulties reported by university teachers regarding web courses arise due to the complexity of the learning situation and shortcomings in planning and organization. The Covid-19 crisis in the foreign educational dimension, as well as in the Ukrainian one, has prompted the development and implementation of many instructions and recommendations aimed at providing methodological support to research and teaching staff of universities and other higher education institutions (Bates, 2020). Much of these recommendations focused on tools and materials that teachers can use to replace face-to-face classes. In addition, teachers were offered hundreds of "hints", mostly without contextualizing the knowledge needed to assess which teaching tactics should take place in a given educational situation, where and how such tactics are likely to work (Rapanta, Botturi, Goodyear, et al., 2020).

However, the diagnosis of challenges to the scientific and pedagogical staff of higher education institutions in the post-pandemic period remains relevant. To this end, a monitoring study was conducted at the leading domestic universities of Ukraine, which included a survey of students and teachers on the status and prospects of online learning, determined the level of satisfaction with the distance learning format of all participants in the educational process.

Analysis of research and monitoring of online learning in Ukrainian and foreign dimensions through research and reports of various universities, organizations shows that most higher education institutions, both domestic and foreign, in the transition to distance learning in a pandemic were guided by those means. Various action plans and activities have been developed, ranging from full-time classes to various forms of blended learning. But what will be the challenges when we all come back to off-line learning? Thus, the

purpose of the article is to present the results of the research, which was dedicated to the problem of distinguishing of these challenges.

2. Methodology and Research

The study of new challenges for scientific and pedagogical staff of higher education institutions in Ukraine was implemented in 3 stages:

1) the first stage is the analysis of scientific research and publications on the problem;
2) development of oral and electronic questionnaires, questionnaires; informing and briefing potential participants in the study; distribution of questionnaires and questionnaires (duration of filling in questionnaires from 1 to 6 months);
3) processing and analysis of the received data;
4) identification of challenges to the scientific and pedagogical staff of higher education institutions in Ukraine analytical justification of ways to overcome them.

It should be noted that the organization of the study included not only an analytical review of scientific papers on the problem of identifying difficulties, barriers and prospects for overcoming them, but also extensive communication with numerous Ukrainian higher education institutions and their involvement in questionnaires and monitoring. Thus, the study covered the following Ukrainian universities and colleges: National Aviation University, Uman State Pedagogical University named after Pavel Tychyna, Municipal Institution of Higher Education “Bar Humanitarian and Pedagogical College named after Mykhailo Hrushevsky”, Sumy State Pedagogical University named after AS Makarenko, Municipal Institution of Higher Education “Uman Humanitarian and Pedagogical College named after Taras Shevchenko”, Hlukhiv National Pedagogical University named after Oleksandr Dovzhenko, East Ukrainian National University named after Volodymyr Dahl, Municipal Institution of Higher Education of Kyiv Regional Council “Bila Tserkva Humanitarian” V. O Sukhomlinsky MNU, Department of Social Work, Pereyaslav-Khmelnytsky State Pedagogical University named after Hryhoriy Skovoroda.

2.1 Research

2.2 Research of features of application of the distance form of training: teaching and student fitbacks

2.3 Profile of respondents

Teachers from ten Ukrainian universities were respondents to the survey. The distribution of responses in these seven universities is presented in Table 1 below.

Table 1.
Distribution of participants.

Institution of higher education	Region of Ukraine	Number of answers
National Aviation University	Northern	120
Uman State Pedagogical University named after Pavel Tychyna	Central	98
Pereyaslav-Khmelnytsky State Pedagogical University named after Hryhoriy Skovoroda	Central	101
Sumy State Pedagogical University named after AS Makarenko	Northern	134
Rivne State University for the Humanities	West	87
Nikolaev National University named after VO Sukhomlinsky	Southern	198
Municipal Institution of Higher Education “Bar Humanitarian and Pedagogical College named after Mykhailo Hrushevsky”	Central	72
Hlukhiv National Pedagogical University named after Oleksandr Dovzhenko	Northern	69
Municipal Institution of Higher Education “Uman Humanitarian and Pedagogical College named after Taras Shevchenko”	Central	54
Volodymyr Dahl East Ukrainian National University	East	95
Municipal Institution of Higher Education of the Kyiv Regional Council “Bila Tserkva Humanitarian and Pedagogical College”	Central	84

According to Table 1, 1125 respondents took part in the survey. Teachers and students of humanities and specializations from all regions of Ukraine answered the survey questions. Respondent teachers were also analyzed for their teaching experience. The results are presented visually in Figure 1.

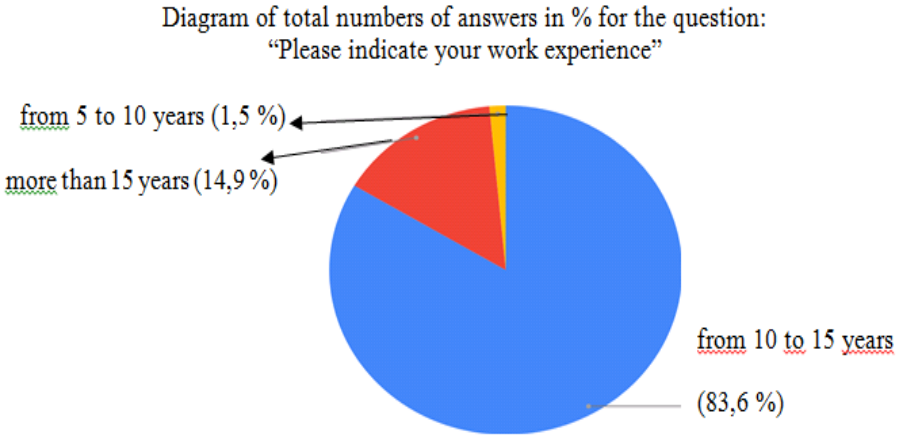


Figure 1. Pedagogical experience of respondents-teachers.
Results are created on the basis of Questionier “Ukrainian scientific community: return to work in wartime and after pandemia”. Melnyk, N. (n/d)

As we see from Figure 1, respondents were mostly experienced teachers, which, on the one hand, allowed them to use their skills in search of innovative ways of learning; however, on the other hand, this may prevent them from being technically competent.

Regarding student respondents, their sample was analyzed from the standpoint of age, which allowed to establish that the study covered 1–5 courses, Diagram 1.

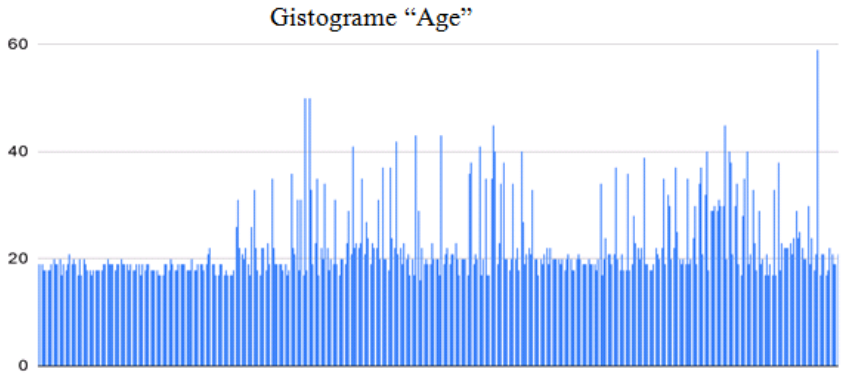


Diagram 1. Results are created on the basis of Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)
Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

These charts show that the predominant age of respondents among students is from 17 to 21–22 years. The chart also shows that there were older respondents, which is evidence that both in-patient and part-time students took part in the surveys.

The questionnaires also provided for the gender of the respondents, as gender, according to Sarısakaloğlu, Atay-Avşar and Z. Acar (Sarısakaloğlu, Atay-Avşar, & Acar, 2015), plays a role because of the difference in the use of technology. between teachers and students of women and men. Quantitative data are shown in Figure 2.

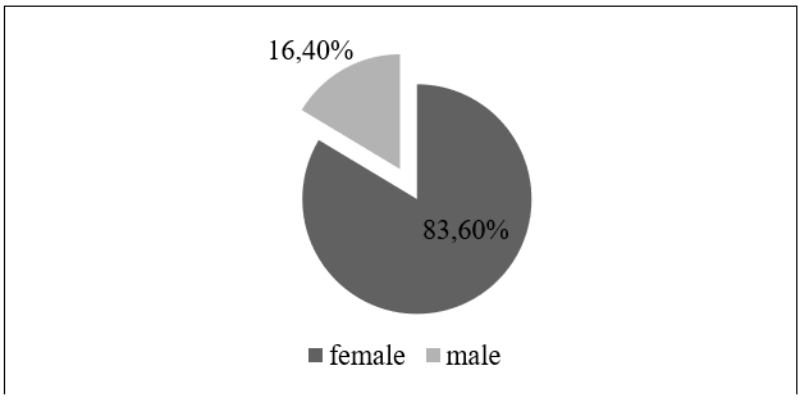


Figure 2. Gender of respondents.
Results are created on the basis of Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)
Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

These charts show that the majority (83.6 %) of respondents were women (girls). This can be explained from the standpoint of two points. First, women are statistically predominant among teachers and students of humanities universities in Ukraine. Second, Ukrainian men (boys) are less active in surveys, filling out questionnaires, and so on.

In the second stage of the survey, we asked respondents to rank the factors and barriers to adaptation to work in conditions of forced social distancing, we obtained the following results:

1) the most difficult in the process of adaptation were psychological barriers (73 %);
2) the next difficult barriers to the content of the respondents were the use of ICT (20 %);
3) methodical (7 %) was determined as the third most difficult;
4) socio-economic barriers. In this block of the survey, we tried to find out whether Ukrainian humanities teachers were emotionally affected, what anxieties and fears they experienced.

In Figure 3 we can see a number of feelings that respondents felt during the introduction of the first quarantine restrictions.

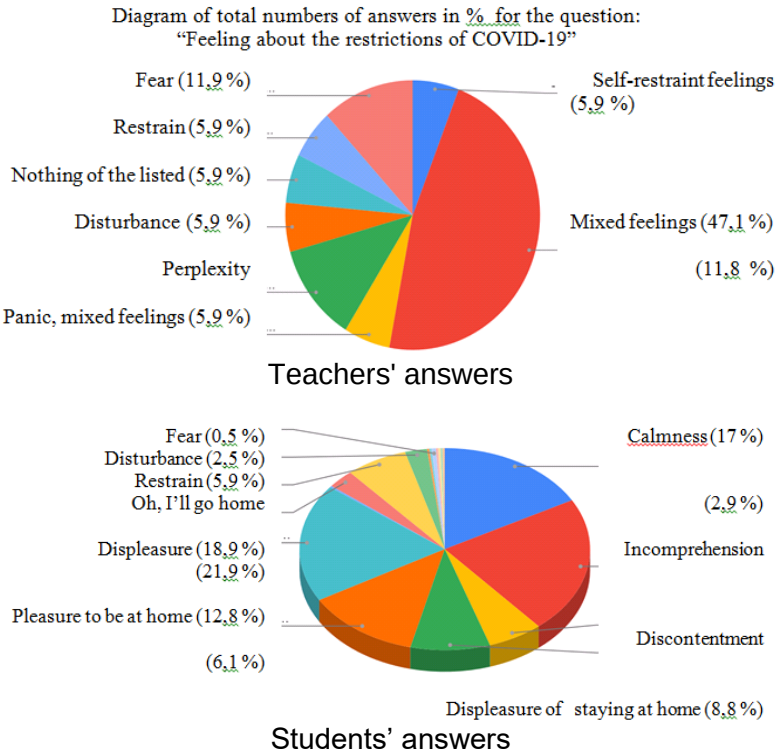


Figure 3. Respondents' feelings of the first quarantine restrictions of COVID-19
Results are created on the basis of Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)
Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

The data of the diagrams show that the majority of respondents, both lectures and students, had mixed feelings (47.1 %) and dissatisfaction due to misunderstanding of what was happening (21.9), and feelings of dissatisfaction with what they would have to teach and learn. through gadgets (18.9 %). We explain the mixed feelings by the situation of uncertainty and lack of awareness about what will happen next. Feelings of irritability – the fact that both teachers and students are accustomed to the classic forms of interaction and communication, and therefore it was quite uncomfortable to get out of the comfort zone when you had to learn something new and gain new experience in a very fast mode and limited time.

It should also be noted that a fairly high rate of restraint in teachers (almost 18 %), while none of the students did not note such emotion. The presence of a sense of restraint in teachers and the absence of students is explained by age and life experience of overcoming unforeseen situations. Older respondents have more experience in overcoming various life difficulties and situations, most adults have formed critical thinking, and therefore their reactions are characterized by greater balance, which is expressed in restraint (Matiykiv, 2012, pp. 38–39) and stress resistance of the adult. It should be noted that none of the respondents expressed readiness to overcome the difficulties, which is explained by the situation of uncertainty and extremeness (Baeva, 2008), which was inherent in the whole society during the introduction of the first strict quarantine restrictions.

Because the Ukrainian government announced only short-term quarantine in March 2020, many faculty and students attributed this more to a break than to the long-term prospect of online learning. The answers (thoughts, views, expectations and plans for this period) of respondents to the situation were initially different, the most typical are presented in Table 2.

Table 2.
Respondents' responses to the first COVID-19 quarantine restrictions introduced in March 2020.

Emotions	Judgments, attitudes and assessments of respondents	Percentage of respondents teach. / stud
Anxiety, excitement, misunderstanding of what is happening	"What's going on?" "What to expect next?" "And how to catch up with the program?" "How to teach students via phones and computers?"	11,8/9,4
Rejection	"We don't need it!", "Why sit at home?! "	9/0
Mixed feelings	"Nothing special", "And what's so terrible here, let's rest"	47,1/0
Indifference	"It won't last long", "In a few weeks we will return to normal operation (training) "	6/10
Fear	"If such a" strict "quarantine is imposed, it is obviously very dangerous"	11,8/0,5
Panic, frustration, frustration	"Horror…", "How tired of all this talk about the coronavirus, they don't work properly…"	5,9/0
Expectation	"Oh, let's get some rest", "I'll have more time for family", "I'll have a lot of free time with my friends!"	17,6/12,8
Planning other activities	"There will be more time for scientific work!", "Hooray, you can go home"	17,8/12,8

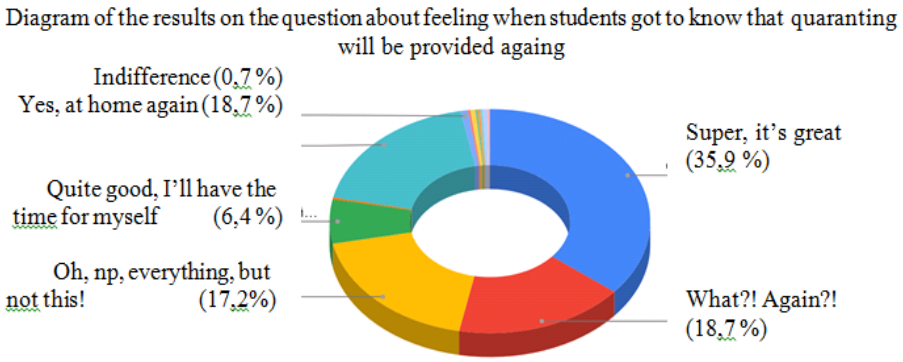
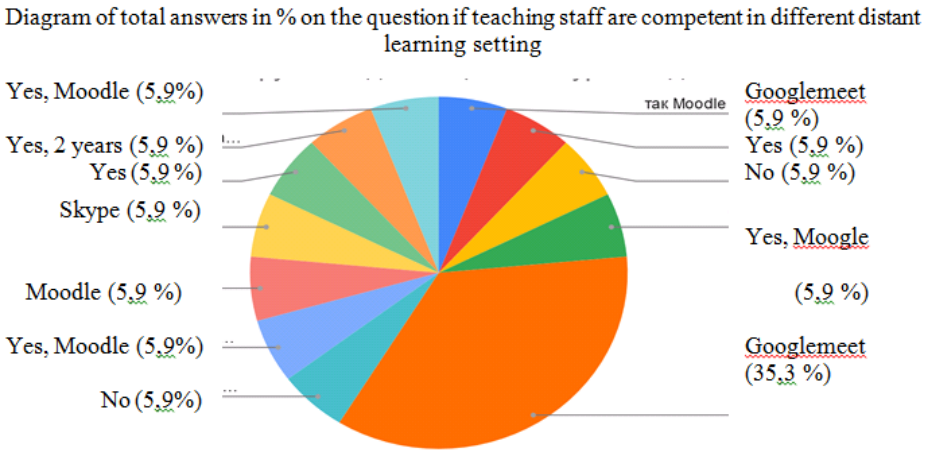


Figure 4. Emotions of respondents during the period of repeated quarantine and return to distance learning.
Results are created on the basis Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)
Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

According to the respondents' answers, most of them experienced stress, which manifested itself in emotions of fear, panic, frustration, frustration and mixed feelings (Trigranyan, 1988). At the same time, it is important to note that opposite to the negative emotions there were feelings of joy (12.8 %), positive expectations (23.5 %) and calm (17 %), which are indicators of optimism of respondents (Jacobs, & Carver, 2020). However, in the period from autumn 2020 to early 2021, the opinions, views and plans of respondents acquired a qualitatively new form, which can be traced in Figure 4.

According to Figure 4, the reaction of most respondents during the re-quarantine and return to distance learning was not as emotional as in the first, and therefore dominated by a palette of positive emotions – cheerfulness and joy (35.9 %), optimism (18.7 %) and readiness (6.4 %); emotions of fear, anxiety, frustration and mixed feelings were no more, a very small percentage of respondents did not respond with perception (17.2) and unwillingness (18.7 %) to return to distance learning and social distancing.

The methodical block of questionnaires included determining the state of readiness of teachers to implement distance learning in the conditions of its forced introduction, determining the characteristics of teachers during the period from the beginning of quarantine restrictions and until now through the prism of subjective visions of teachers and students' assessment. they received during distance learning due to quarantine restrictions. Respondent teachers and students initially quarantined experienced methodological incompetence in mastering ICT learning, and the percentage of teachers in this aspect was much higher (35.3 % + 5.9 % = 41.2 %) than students (9.1 % + 0,2 = 9.3 %), as shown in Figure 2. Students had technical difficulties not because of ignorance of the platform, but because of technical problems with communication (43.2 %).



Teaching staff answers

Questionier “Ukrainian scientific community: return to work in wartime and after pandemia”. Melnyk, N. (n/d)

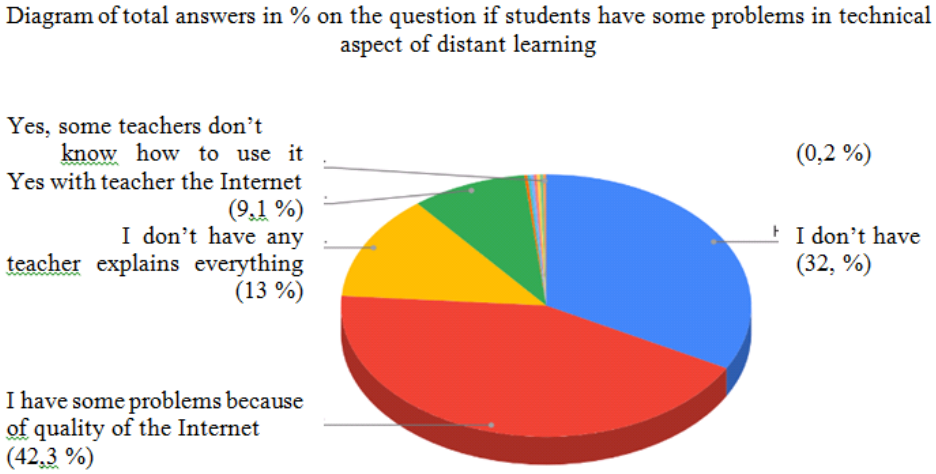


Diagram 2. Results are created on the basis of Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

At the same time, the majority of respondents (52.3 % + 0.5 % = 52.8) positively assessed the actions of educational institutions in which they work or study, regarding the correctness of instruction and the gradual transition from full-time to distance learning of the educational process (Figure 5).

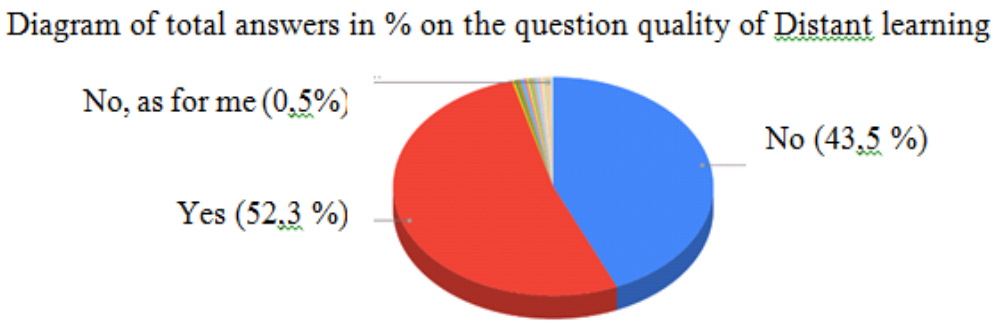


Figure 5. Evaluation of the quality of the organization of the distance form of organization of the educational process in higher education institutions.
Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)
Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

Communication with teachers, administration and classmates is also an important component of distance learning (Gillett-Swan, (2017)). The priority for the educational process is undoubtedly communication with the teacher, as it provides an assessment of the quality of the organization of distance learning and services provided by the institution of higher education. The survey on the communicative component in the process of distance learning showed that 52.9 % (32.9 % + 13 %) of respondents among students did not experience any barriers, 43.2 % of barriers are related only to the technical shortcomings of distance learning platforms, the remaining 9.3 % (0.2 % + 9.1 %) of students had barriers due to insufficient training of teachers for methodological support in online learning.

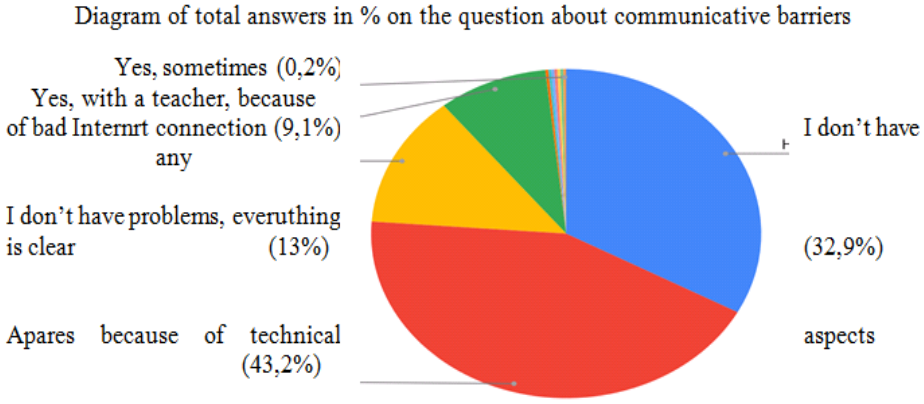


Figure 6. Satisfaction with the communicative aspects of distance learning.
Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)
Survey on the organization of the educational process in the context of Russian aggression and after pandemia. Melnyk, N. (n/d)

Note that when we conducted the second stage of the survey and questionnaire during the period of re-introduction of quarantine restrictions and at the end of the strict

quarantine in 2021, the answers, attitudes, judgments and assessments of respondents changed. Thus, both teachers and students expressed their positive attitude to the return to the remote format, felt more prepared to work in a social distance and expressed the prospects for further work in the remote format.

At the same time, 33.4 % would like to continue distance learning (28 % said that it is very convenient + 4.9 % believe that distance education is the future of education); categorically against 26.7 %, of which 0.7 % simply would not like a distance format, and 26 % would not like to continue their studies due to the deteriorating level and quality of their knowledge (Figure 7). Among the answers of teachers, the percentage of those who are categorically against permanent or further remote format is much higher – 41.2 % strongly against, others simply do not want – 41.2 %, and only 17.6 expressed readiness to continue working as in quarantine (Figure 8).

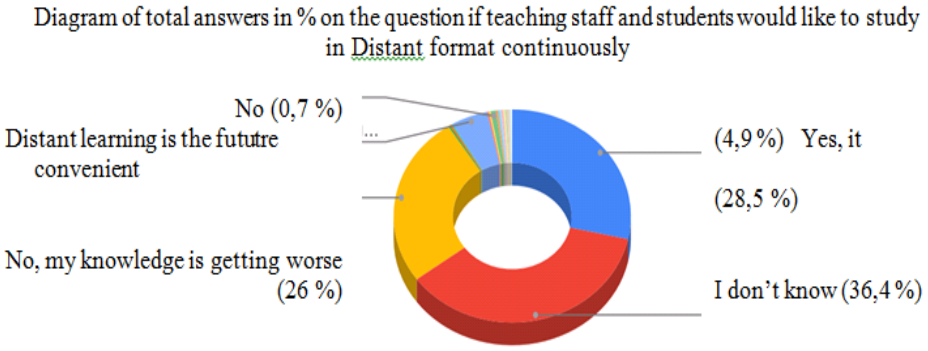


Figure 7. Teachers' answers about the prospects of introducing distance learning.

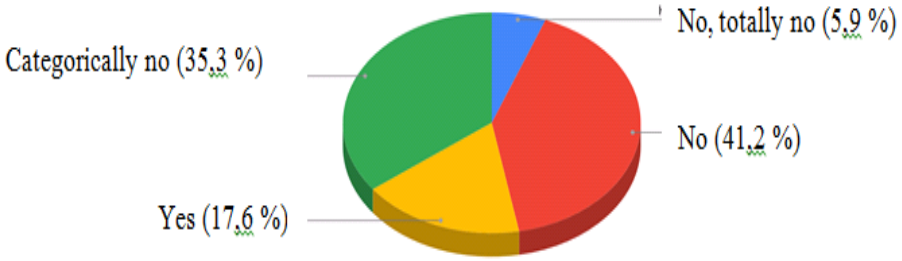


Figure 8. Teachers' answers about the prospects of introducing distance learning.
Results are created on the basis of Questionier "Ukrainian scientific community: return to work in wartime and after pandemia". Melnyk, N. (n/d)

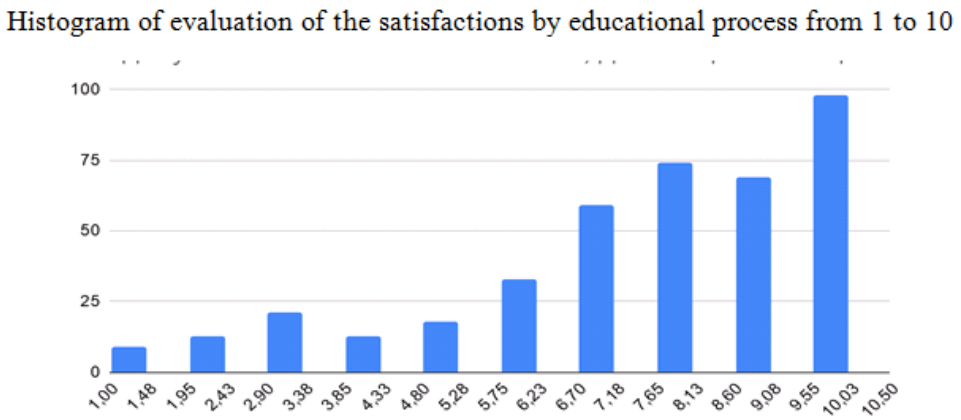
The positive dynamics testifies to the experience gained during the first quarantine and the transition to a remote format, which allowed a more optimistic response to the future prospects of such an organization of the educational process. However, students' answers about the quality of their knowledge, motivation to learn and assessment of their knowledge lead to an analysis of what new challenges teachers will face after leaving

quarantine and after the completion of social distancing. Here are examples of individual surveys on these aspects in the form of table 3.

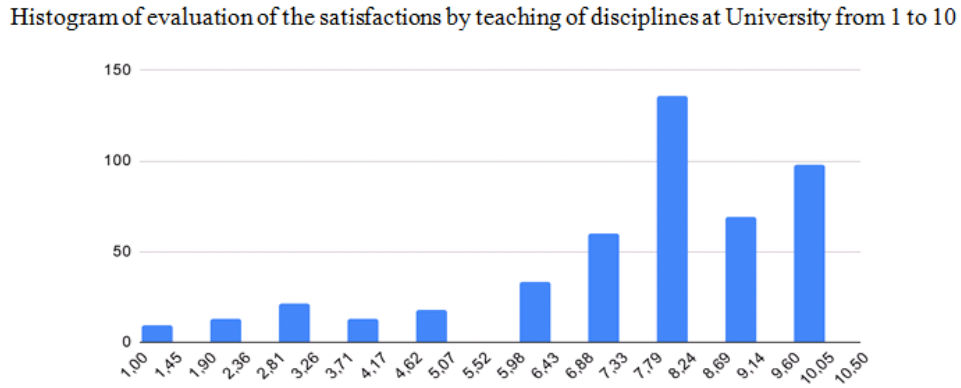
Table 3.
The assessment of the quality of the organization of the distance educational process.

Quality assessments of the organization of the distance educational process	Evaluation of the quality of teaching the discipline	Self-assessment of own work / quality of knowledge acquisition
98 % expressed satisfaction with the quality of education (Histogram 1)	The quality of teaching the discipline from the point of view of most students was sufficient (grades 7.79–8.24) to ensure the proper functioning of the educational process (Histogram 32)	The vast majority of surveyed students rated their work as "good", arguing that the depth of their knowledge became worse through no fault of their own (Histogram 3)

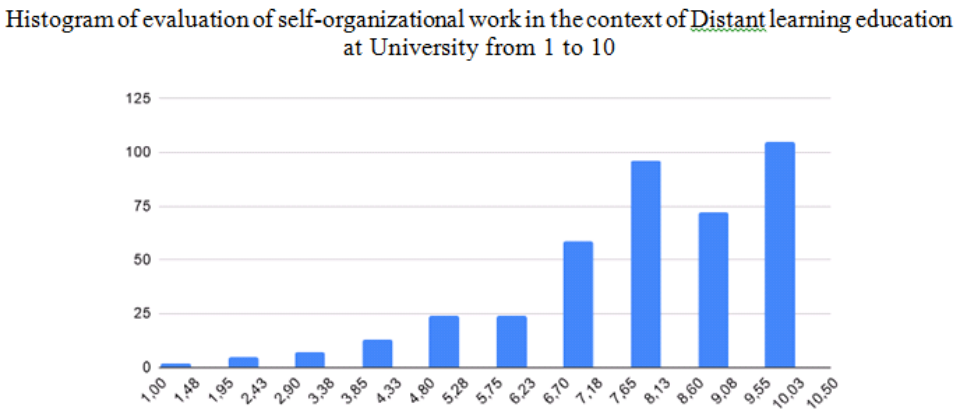
Respondents' answers on the assessment of the quality of the organization of the distance educational process, on the assessment of the quality of teaching the discipline and self-assessment of their own work.



Histogram 1.



Histogram 2.



Histogram 3.
Results are created on the basis of Questionier “Ukrainian scientific community: return to work in wartime and after pandemia”. Melnyk, N. (n/d)

3. Arguments and Discussions

Currently, the scientific and pedagogical staff, administration and management of universities have managed to reflect on their own experience in implementing distance learning and organizing the effective functioning of the educational institution, to observe and compare their own pedagogical ideas and practices. There were a number of investigations dedicated to student’s reactions on way of learning during COVID-19 pandemic (Wargadinata, Maimunah, Dewi, 2020); some aspects of challenges were presented in R. Simamora investigation (2020) etc. During the period of social distancing from the beginning of the pandemic in 2019, training seminars were developed, conducted by institutions, organizations and colleagues at the national and international levels. Online and blended learning have already acquired a completely new perception and understanding (Noorashid, Le Ha, & Alas, 2020). There were recommendation on developed by United Nations Development Programme (UNDP).

A survey conducted by the National Agency for Quality Assurance in Education showed that 86% of Ukrainian teachers did not have significant experience in online education before COVID-19; 80 % of Ukrainian teachers considered themselves ready to study online; 70 % of students were generally satisfied with the quality of online education in universities, although they experienced some difficulties and problems (Stukalo & Simakhova, 2020). In contrast, N. Melnyk and the team of co-researchers showed that many teachers of the humanities experienced psychological discomfort and methodological difficulties in implementing the educational process online (Melnyk, Kovtun, Postolenko, & Tovkach, 2020). Among the recommendations for the introduction of distance learning were: organization of training courses on online teaching methods for teachers; organization of in-depth training courses for online teaching methods for teachers of non-pedagogical specialties (including training in interactive methods of online teaching, formation of an individual learning trajectory, development of multidis

ciplinary online courses); ensuring constant monitoring by the university management of the satisfaction of students and teachers of online learning in order to accumulate statistics in the dynamics, etc. (Stukalo & Simakhova, 2020).

Among the recommendations in overcoming barriers were making changes to the schedule and specifics of the teacher's work; adjustment of individual plans of teachers in the conditions of quarantine; constant replenishment of information materials of the MOODLE distance learning system; activation of educational, cognitive and self-educational activities of students with the help of educational web resources; constant monitoring of the advantages and disadvantages of distance learning in higher education (Melnyk, Kovtun, Postolenko, & Tovkach, 2020). According to research by Western scholars (Rapanta, Botturi, Goodyear, et al., 2020), a significant challenge for Western university teachers has been the lack of pedagogical knowledge required for online learning (Angeli and Valanides 2005; Kali, Goodyear and Markauskaite 2011; Ching, Hsu and Baldwin 2018). Such knowledge includes the technical and administrative aspects of online teaching (for example, the use of platforms and tools and the organization of work processes, respectively). More importantly, it includes the pedagogical foundations and knowledge of the principles necessary for the formation and development of distance learning skills (Rapanta, Botturi, Goodyear, et al., 2020).

According to the already mentioned study by O. Kovtun, N. Melnyk, S. Hryniuk and I. Rohalska-Yablonska, the university is a complex system that includes many actors and functions important for the stability and development of universities, and the situation of force majeure has changed significantly. All processes in higher education. Since the proclamation of the pandemic, most universities in the world have literally had to urgently reconsider their methods of management and organization. Many experts believe that changes related to the pandemic can completely transform the field of higher education, and as a result, require great attention and response (Kovtun, Melnyk, Grynyuk, & Rohalska-Yablonska, 2020).

The main areas of impact of the pandemic:

Research. The research area was least affected during the pandemic compared to other areas of university activity. Many researchers noted that they had more time to search and read scientific literature, work on their articles, and research in general than before the pandemic. In addition, the degree of interaction between researchers around the world remains unchanged, and some scientists note an increase in scientific collaboration on the Internet.

Planning. Due to the fact that there are currently no accurate forecasts for the development of COVID-19 and its impact on the economy, it is extremely difficult for universities to build long-term strategy and planning, but universities in many countries are prepared for a scenario with partial or full online education. It should be noted that many other university processes have been suspended or also switched to an online format, which creates additional risks for universities.

Campus economics. One of the most difficult tasks for universities is to predict the losses associated with the closure of campuses. For many universities, the campus is not just a learning environment that stimulates the formation of a student community. The closure of the town has a very negative effect on university budgets. In addition, the closure of the campus could also lead to possible staff changes, staff reductions and higher unemployment in the region.

Personnel policy. A survey of university leaders shows that working with teachers is one of the main tasks of universities. Qualitative transition to the online format in many cases involves the availability of refresher courses, individual work with teachers (teachers), processing the content of the course, etc., which also requires additional resources. Moreover, due to financial constraints, universities are reviewing their recruitment policies and continuing contacts with faculty, both internally and externally.

Ensuring equal opportunities. The pandemic itself can significantly widen the gap between different populations due to inequalities in social protection, health care and financial savings. Inequality in higher education can be caused by unequal access of students to distance learning in different countries and even within one country (United Nations Development Program, 2020). Despite the awareness of the seriousness of the problem, the range of forms of support available to students from socially vulnerable groups was not very wide.

Health and safety. Under normal campus conditions, security is an important part of university administration. Since most universities conduct online classes during a pandemic, the following tasks come to the fore in terms of security:

- Support for local communities. One of the responses to the challenges of the pandemic has been volunteering at universities that support older people who find it most difficult to adapt to self-isolation, provide local community information on how to protect themselves from the coronavirus, help health facilities, etc.
- Support for students and teachers. During the social distance, it is important to receive feedback from students and university staff. Universities understand that self-isolation can be very stressful for students from disadvantaged backgrounds. A global survey of university leaders shows that supporting students and staff in such cases is the highest priority among short-term goals (Jump, 2020);
- Monitoring. Universities monitor the health of students and staff and use advanced data analysis tools to assess individual translations of university work online.

Monitoring the quality of education. One of the biggest concerns of universities during a pandemic is the decline in the quality of higher education. Due to the uneven readiness of staff and departments for online mode, lack of technical equipment and other difficulties, many students gain a completely different educational experience in the Internet environment, and it is important for universities to identify weaknesses and

develop the right monitoring methods in new conditions. In this context, national and professional centers offer different solutions to help universities.

4. Conclusions

Conducted surveys, questionnaires and analysis of the results of the obtained data make it possible to identify certain psychological and methodological and other aspects that will challenge the scientific and pedagogical staff of higher education institutions of Ukraine during the quarantine period, which are divided into two subgroups: challenges to scientific and pedagogical staff of higher education institutions, the nature of which is the peculiarities of the professional activities of teachers and challenges to the scientific and pedagogical staff of institutions of higher education, the nature of which are the features of the educational activities of students.

The first group of calls includes:

1. Motivation of professional activity (according to the research and answers of respondents presented in diagrams 1–2, figures 1–8, tables 1–3 and histories 1–3, during quarantine some teachers, especially at the beginning, showed lower activity in distance learning courses ; did not always have time to respond systematically to requests from students and administration, as time was spent on the mastery and implementation of ICT in the practice of their professional activities, etc.; a certain percentage of teachers was limited to placing teaching materials on distance learning platforms, others used messaging networks, which qualitatively worsened the desire to communicate, as it took a lot of time to correspond with students and instruct them on the tasks, a certain percentage of teachers did not get along at all);
2. Organizational and methodological unit, which will provide a reorientation of the organization of professional activities from remote to offline format (switching to a new time frame – time management (working from home, the teacher did not have to spend time on the road), another type of preparation for couples, adjustment of work to new conditions (classroom) of ICT support, as not in all domestic institutions of higher education 100 % technical support, working “from home” the teacher without unnecessary obstacles could present a presentation, educational material on the topic, etc.);
3. Psychological aspects of returning to work offline (during the period of social distancing communicative aspects of communication have changed – the teacher did not work “for the audience”, switching to a new mode of work will directly or indirectly affect the emotional state of teachers, provoking emotional stress, etc.).

The second group of calls will be characterized by similar components:

1. Motivation of students (according to the surveys of students presented in the article, their motivation for cognitive activity also decreased, which is explained not only by the stresses caused by forced social distancing, forced mastery of distance learning platforms, multi-vector instruction and speed of change, but also that “staying at home”

students had more time to prepare, and therefore it was possible to "postpone their studies" (according to an oral interview of students of Ukrainian higher education institutions); distance learning platforms (especially those that were not uploaded to the distance platform), teachers had to spend on mastering certain distance learning platforms – registration on platforms, development of electronic resources, etc. All this allowed students to perceive the first lockdown as a vacation. worth podk to realize that this is not an absolute majority;

2. Organization of the learning regime, another challenge that will need to be overcome by scientific and pedagogical staff after quarantine (we connect this challenge with the fact that teachers will not only come up with new forms of high motivation of students to cognitive activity, but also give clear instruction on deadlines, preparation for pairs and advice on the best ways to master the material, etc.);
3. Provision of ICT audiences with means. Note that returning to the audience of students who have already gained experience in online learning and experienced the benefits of ICT in the educational process will require teachers to widely use presentations, videos, teaching resources and in the classroom, which is a challenge for research and teaching staff insufficient staffing of these audiences.
4. Students' request for emotional stability and competence of teachers, which will provide scientific and pedagogical staff to demonstrate emotional intelligence in a given environment, which will be expressed in calm, balance, poise, openness to communication and more.

The challenges we have identified do not claim to be exhaustive, as the study is aimed at a general description of the problem and an attempt to identify certain aspects that will determine the professional activity of research and teaching staff after quarantine restrictions and return to the classical form of education in higher education. Further diagnosis of challenges requires a more in-depth analysis of the scientific literature on the problem, the study of approaches to identifying such challenges and the development of a structural scheme that will provide prospects for further research in this area.

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Positive learning environment in educational sphere

Ambiente de aprendizaje positivo en el ámbito educativo

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Abstract

The practical implementation of a positive learning environment in school education needs detailed research. Its effects can be achieved by creating appropriate learning environments and technological support to provide a high-quality education for students. Schools must be purposefully designed to inspire creativity, independence, and a love for learning to provide students with an exceptional education. Great school environments must be prepared to support students' intellectual, physical, social, and emotional development. Schools must also

continually improve their campuses in response to students' needs. In terms of positive environment theory, a positive environment can contribute to students' successful academic adjustment. The student's academic success is a result of academic adjustment accordingly and can be assessed through intellectual engagement and self-managed learning. This research aims to establish regularity, promote the implementation of a positive learning environment in school education by surveying schools, establish the ability of educational institutions to provide a positive learning environment in school education, and determine the attitude of students and schoolmasters towards a positive learning environment. Research methods: comparative analysis; survey; systematization, and generalization. Results. As a result of the survey, it was found that students understood a positive learning environment in school education as a fun environment (235 students), a quiet environment (214 students), an environment where schoolteachers are not discouraged (208 students), a background with values (171 students), a place as home (174 students), an environment where ideas are respected (163 students), an environment where there is no fighting (186 students), an environment with rules (185 students), an environment where games are allowed (179 students), an environment where no one is afraid of the schoolmaster (181 students), an environment where responsibilities are performed (172 students), etc. The schoolmasters were found to understand a positive environment in school education as a quiet environment (6 schoolmasters); an environment where everyone feels valued (28 schoolmasters); an environment that focuses on unique and inclusive education (4 schoolmasters); a fair environment for all (16 schoolmasters); an environment where people trust each other (13 schoolmasters); an environment where everyone is at peace (10 schoolmasters); an environment where everyone finds something for themselves (17 schoolmasters); an environment where there is no repression (21 schoolmasters). Based on the research conducted, we found that the existing proposals of schoolteachers and students for the positive learning environment implementation in school education contribute to the solution of the current problems through further educational process improvement. It will ensure a positive learning environment implementation in school education. It was defined that the importance is acquired by the school management and administration tasks for the positive learning environment implementation, which fulfillment will allow fully implement a particular school management and administration target. Ensuring a positive learning environment in school education has been found to contribute to implementing 10 critical competencies according to the New Ukrainian School Concept.

Keywords: Positive learning environment, school education, students, schoolteachers.

Resumen

La implementación práctica de un ambiente de aprendizaje positivo en la educación escolar necesita una investigación detallada. Sus efectos se pueden lograr mediante la creación de entornos de aprendizaje apropiados y soporte tecnológico para brindar una educación de alta calidad a los estudiantes. Las escuelas deben estar diseñadas a propósito para inspirar la creatividad, la independencia y el amor por el aprendizaje para brindar a los estudiantes una educación excepcional. Los entornos escolares excelentes deben estar preparados para apoyar el desarrollo intelectual, físico, social y emocional de los estudiantes. Las escuelas también deben mejorar continuamente sus campus en respuesta a las necesidades de los

estudiantes. En términos de la teoría del ambiente positivo, un ambiente positivo puede contribuir al ajuste académico exitoso de los estudiantes. El éxito académico del estudiante es el resultado del ajuste académico correspondiente y puede evaluarse a través del compromiso intelectual y el aprendizaje autogestionado. Esta investigación tiene como objetivo establecer la regularidad, promover la implementación de un ambiente de aprendizaje positivo en la educación escolar mediante encuestas a las escuelas, establecer la capacidad de las instituciones educativas para brindar un ambiente de aprendizaje positivo en la educación escolar y determinar la actitud de los estudiantes y maestros hacia un aprendizaje positivo. ambiente. Métodos de investigación: análisis comparativo; encuesta; sistematización y generalización. Resultados. Como resultado de la encuesta, se encontró que los estudiantes entendían un ambiente de aprendizaje positivo en la educación escolar como un ambiente divertido (235 estudiantes), un ambiente tranquilo (214 estudiantes), un ambiente donde los maestros no se desaniman (208 estudiantes), un antecedentes con valores (171 estudiantes), un lugar como hogar (174 estudiantes), un ambiente donde se respetan las ideas (163 estudiantes), un ambiente donde no hay peleas (186 estudiantes), un ambiente con reglas (185 estudiantes), un ambiente donde se permiten los juegos (179 estudiantes), un ambiente donde nadie le tiene miedo al maestro (181 estudiantes), un ambiente donde se cumplen las responsabilidades (172 estudiantes), etc. Se encontró que los maestros entienden un ambiente positivo en la educación escolar como ambiente tranquilo (6 maestros de escuela); un ambiente donde todos se sientan valorados (28 maestros); un entorno que apuesta por una educación única e inclusiva (4 maestros); un entorno justo para todos (16 maestros de escuela); un entorno donde las personas confían entre sí (13 maestros de escuela); un ambiente donde todos estén en paz (10 maestros de escuela); un ambiente donde cada uno encuentra algo para sí mismo (17 maestros de escuela); un ambiente donde no haya represión (21 maestros). Con base en la investigación realizada, encontramos que las propuestas existentes de docentes y estudiantes para la implementación de ambientes positivos de aprendizaje en la educación escolar contribuyen a la solución de los problemas actuales a través de una mayor mejora del proceso educativo. Garantizará la implementación de un ambiente de aprendizaje positivo en la educación escolar. Se definió que la importancia que adquieren las tareas de gestión y administración escolar para la implementación de un ambiente positivo de aprendizaje, cuyo cumplimiento permitirá implementar a cabalidad un determinado objetivo de gestión y administración escolar. Se ha descubierto que garantizar un ambiente de aprendizaje positivo en la educación escolar contribuye a implementar 10 competencias críticas de acuerdo con el Nuevo Concepto Escolar Ucraniano.

Palabras clave: Ambiente positivo de aprendizaje, educación escolar, estudiantes, docentes.

1. Introduction

Schoolmasters deal with a number of challenging student behaviors. Many schools have been found to deal with disrespect, verbal abuse, bullying and general frustration in the classroom, which occur daily or weekly (DeVoe et al., 2004; Gottfredson et al., 2005; Halstead, & Taylor, 2000; Malone & Tietjens, 2000; McGinnis et al., 1995). Schoolmasters inform that the disruptive behaviors they are forced to deal with take up a large amount

of class time daily (Sprague & Walker, 2000). These behaviors implicate simple disrespect, failure to follow simple instructions, and general failure to complete tasks. Schoolmasters consider problems associated with challenging student behavior arduous and stressful in their professional lives (Furlong, Morrison, & Dear, 1994; Safran & Safran, 1988; Scott et al., 2007).

Schools have a huge liability to provide inner peace, social peace, and a learning environment, so the importance of creating peaceful schools in the community is evident. Schools are places where students acquire academic skills and knowledge and self-control, social responsibilities, and respect for others. Every child has the right to be educated in a safe and positive school environment (Leach, 2005).

Positive schools that can support peace are essential to well-being, happiness, psychological health, and achievement. School is a significant source of human development and, as such, the primary place to ensure children's happiness. A happy school can be defined as a school where students, schoolmasters, administrators, and staff feel happy.

A place where everyone feels a sense of belonging and feels content, secure, and able to be themselves can be defined as a happy school. Therefore, the collective liability of students, schoolmasters, parents, and school administrators is to compose a loving and happy school environment (Calp, 2020).

Schoolmasters should work to create a positive learning environment and, therefore, be able to determine and remediate classroom conditions that may increase the likelihood that desired behaviors will emerge in the classroom (Hardman & Smith, 1999). When schoolmasters compose a caring environment, they create an environment where rules are set, potential problems are planned, and positive behavior is the center of support in the classroom.

Schoolmasters who compose positive classrooms pay close attention to all environmental stimuli present in their learning environment. Consequently, managing the classroom and creating a positive learning environment in school education is a multifaceted and academic process (Banks, 2014).

The aim of this research is to establish regularity for facilitating the implementation of a positive learning environment in school education by conducting a school survey to develop the ability of educational institutions to provide a positive learning environment in school education and to determine the attitudes of students and schoolmasters towards a positive learning environment.

Research tasks of the article:

1. Analyze the critical tasks of school management and administration to implement a positive learning environment.
2. Analyze the 10 critical competencies of the New Ukrainian School Concept that can be effectively implemented in a positive learning environment.
3. Survey students and schoolteachers to determine their perceptions of a positive learning environment in school education and analyze their attitudes toward learning in a positive learning environment.
4. Determine student and schoolmaster recommendations for implementing a positive learning environment in school education.

2. Literature review

In recent years, the educational environment has predisposed increasing attention from researchers, especially concerning how it is measured (Genn & Harden 1986; Genn, 2001a, b; Gudrun et al., 2010).

The first step in building the foundation, creating an educational environment in which all students feel supported, safe, and valued, is to make the trust that leads to authentic participation and engagement in learning. Composing a positive learning environment begins with schoolmaster self-reflection, continues with planning, then is an ongoing and dynamic process when implementing the curriculum. Maintaining a positive learning environment is a work in progress – the schoolmaster must always think about how to support a positive learning environment and be attentive to how students perceive the learning environment. The main characteristics of a positive learning environment include:

1. Students feel physically and emotionally safe. They see the classroom as a place where they can be themselves and express themselves and their ideas without judgment.
2. Students know they are valued and respected regardless of other factors such as ability, gender, sexuality, race, ethnicity, or religion.
3. Students have ownership and input related to classroom structure and expectations, from creating a unique space for students to class discussions to establishing norms and expectations.
4. All students got a task to achieve high expectations, and all students receive the support necessary to meet those expectations.
5. Established standards of behavior are enforced consistently and fairly for all students.
6. The classroom structure provides students with multiple and varied opportunities for success.
7. The schoolmaster gets to know all students and uses that knowledge to create meaningful experiences.
8. There is a positive relationship between schoolmasters and students and between students in the classroom (Human Kinetics, 2022).

In the world of education, there is a realization that children need to be taught the art of peace. As a result, more and more concepts of peace, attitudes, values, and behavioral

skills are integrated into many countries' school curricula. There is also a growing interest in developing peace-related disciplines such as values education, global education, and moral education. Peace education encourages skills, knowledge, and attitudes that promote peaceful prevention, conflict resolution, or mild social conditions. Values of nonviolence and social justice are the foundation of peace education (Lubelska, 2018).

School climate is an essential variable for a safe school environment. It refers to the quality and character of school life and includes unwritten beliefs, values, and attitudes that become the style of interaction between students, schoolmasters, and school administrators. School climate defines acceptable behavior parameters for all school participants and ascribes individual and institutional liability for school safety (Welsh, 2000).

The quality of school relationships, is a multidimensional concept that includes interpersonal, organizational, and instructional dimensions and can be defined as school climate (Loukas et al., 2006). School climate evolves from the general perception of people in the school, affects all people, and is influenced by their behavior (Hoy, 2003). A peaceful school is where friendly individuals, casual relationships, a quiet school community, and peacemaking activities grow and are maintained.

A positive school climate is a vital component of successful schools and therefore is often the goal of school-wide initiatives (Brand et al., 2003; Koth et al., 2008). Through the application of peace education and the creation of a culture of peace, schools can have the following significant benefits:

1. Schools can create a more humanistic approach to governance.
2. Schools can improve schoolteacher-parent, schoolteacher-student, schoolteacher-schoolteacher, and student-student relationships, improving the quality of teaching and learning.
3. Schools can develop good attitudes among students and schoolteachers, such as cooperation and mutual respect, and improve students' moral behavior.
4. Schools can help students' healthy emotional development.
5. Schools can promote socialization by participating in interactive and cooperative educational activities.
6. Schools can develop the creativity of students and schoolteachers (Balasooriya, 2001).

There has been a significant amount of research on school climate. (Banks, 2014; Brand et al., 2003; Cohen et al., 2009; Egeberg et al., 2016; Gage et al., 2014; Koth et al., 2008; Thapa et al., 2013; Turner et al., 2014). These studies concluded that children could experience the concept of peace from an early age concerning personal cognitive development, and a positive school climate implied many variables such as self-esteem, academic achievement, and well-being (Calp, 2020).

Schoolmasters must learn to distinguish between problem behaviors that are best addressed by emergency management and those that are better handled by other approaches designed to change behavior. Easy but potentially disruptive behavior problems can often be linked to poor classroom structure. The structure of the classroom environment can influence student behavior in ways that do not always require schoolmaster intervention but require consideration of how the environment is organized (Smith & Misra, 1992). Preventing problem behavior is an integral part of classroom behavior management (Banks, 2014).

A growing base of research supports the use of reinforcing positive behavior to improve students' social behavior (Biglan, 1995; Horner et al., 2005; Lewis & Sugai, 1999; Sugai et al., 2005; Olweus, 2002; Olweus, 2003; Slaughter-Defoe, Carlson, 1996; Oppenheimer & Kuipers, 2003; Hakvoort, 1996; Levin, 2003). The whole-school idea of positive behavior support addresses the behavioral issues that hinder student learning from promoting positive, safe, and productive learning to support academic outcomes. The idea of positive behavior support at the classroom level is based on the exact expectations that have been set throughout the school but includes individualization to meet the unique needs of that class (Scott, 2001). In the classroom, universal prevention components of the whole-class idea of positive behavior support include an effective classroom management structure (physical environment and rules), effective instructional practices, a system for confirming that students are following the rules, and classroom discipline practices (Hieneman et al., 2005).

A positive learning environment in school education should prepare children to participate effectively in a free society in a spirit of tolerance, gender equality, understanding, and friendship. In the classroom, students improve communication skills because communication is the key to conflict resolution. Therefore, students learn at school to respect their schoolmasters and friends. They are taught how to deal with stress, let others speak and express their opinions, and behave in a group. In this way, education spreads knowledge, values, skills, and attitudes that are important to countries' economic, political, and social development. Peace education is a process that involves the acquisition of values, knowledge, and the development of skills, attitudes, and behaviors so that one can live in harmony with oneself, others, and the environment (Salomon, 2002).

Consequently, the problem of forming a positive learning environment in school education and the study of obstacles and prospects for its implementation is widely reflected in scientific publications through theoretical research and practical examinations. However, the issue of forming a positive learning environment in school education remains relevant and open for further study.

3. Methods and Materials

The implementation of the goal of this exploration involves the use of research methods such as:

- systematization of the main tasks of management and school management for the implementation of a positive environment;
- systematic and logical analysis, the method of synthesis of information;
- generalizing the latest scientific publications and normative legal acts on providing a positive learning environment in school education for implementing 10 key competencies according to the New Ukrainian School Concept.

To determine individual attributes of a positive learning environment in school education was carried out using descriptive statistics, which was provided by a survey using MS Forms Pro. The survey was conducted to determine students' and schoolmasters' perceptions of a positive learning environment in school education and to analyze their attitudes toward learning in a positive learning environment. An online survey was conducted from December 12 through April 10, 2022, that collected information from 600 students and 75 schoolteachers. These participants responded to questions about what they understand as a positive learning environment in school education, expectations, and general attitudes toward a positive learning environment. The following questions were addressed in this survey:

1. What do you understand by a positive learning environment in school education?
2. What steps need to be taken to implement a positive learning environment in school education?
3. What do you recommend for implementing a positive learning environment in school education?

4. Results

The students and schoolteachers of I–III grade specialized school № 112 named after T. Shevchenko in Kyiv, Secondary General Education School № 27 named after the hero of the Heavenly Hundred Yuri Verbitsky in Lviv, and School of I–III grade № 78 Pechersk district of Kyiv took a survey. They were offered to give their definition of a positive learning environment in school education. We collected responses from all 300 students in 13 categories. As reflected in Table 1, students mainly used “fun” and “quiet” to describe a positive learning environment in school education. The fun concept ranked first among the responses provided when defining a positive learning environment. Sometimes silence can be essential for adults to feel calm. But they are asking for silence as a child is a situation at odds with the developmental goals of children. It is not like children to learn silence, but to communicate, move, be active, and act out loud to understand and explore the world.

Some students considered games an essential tool for providing a positive learning environment in school education. Students talked about performance; some spoke about values such as love, helpfulness, solidarity, and empathy, while others spoke about respect for different ideas. An important finding is that respect for thoughts or different

ideas is valuable to the child and is seen as the key to peace. Students' perceptions that universal values will provide stability are also fundamental.

Table 1.
Students' understanding of a positive learning environment in school education

№	*What do you understand by a positive learning environment in school education?*	*Parameters that guided students in assessing a positive learning environment in school education*	*Overall*
1	It's a amusement environment	cheerfully, funny	*235*
2	It's a quiet environment	silently, quietly	*214*
3	It's an environment where schoolmasters don't get discouraged	happy schoolmaster, sad schoolmaster, don't upset the schoolmaster	*208*
4	It's an environment where everyone is decent and essential	polite, sensitive, respectful, considerate	*192*
5	It's an environment where there's no scuffling	quarrel	*186*
6	It's an environment with rules	*don't run down the hallways, don't run up and down the stairs, mess up classroom items, respect the principal, follow the rules, throw trash on the floor, use school water, don't waste it*	*185*
7	It's an environment where no one is afraid of the schoolmasters	afraid of the schoolmaster, fear of schoolmaster, frightened of schoolmaster, schoolmaster shouting, violence	*181*
8	It's an environment where games are permited	playground, the playing area, outdoor games	*179*
9	It's a place like home	homelike, comfortable, quiet, a place with a kitchen	*174*
10	It's an environment where we meet responsibilities	prepare your school bag, speak with permission, listen to the lesson, do your homework	*172*
11	It's an environment with values	love, helpfulness, ability to share, respect, compassion, honesty, kindness	*171*
12	It's an environment where ideas are respected	reference for various thoughts, respect for thoughts	*163*
13	It is an environment where everyone is happy	inner happiness	*101*

Source: Compiled by the authors.

Schoolmasters also defined a positive learning environment in school education. We collected responses in nine categories. As shown in Table 2, schoolteachers mainly emphasized that everyone felt valued when defining the concept of a positive learning environment in school education. All schoolmasters want to see the value and an environment where they feel their value is peaceful and happy for them.

Table 2.
Schoolteachers' understanding of a positive learning environment in school education

№	What do you understand by a positive learning environment in school education?	Parameters that guided schoolteachers in assessing a positive learning environment in school education	Overall
1	It is an environment where everyone feels valued	value, gratitude, precious	*28*
2	It is an environment where there is no repression	pressure on someone, violence	*21*
3	It is an environment where everyone finds something for themselves	favorite things, unique objects, pleasure	*17*
4	It is an environment where everyone is fair	equal rights, equality, discrimination	*16*
5	It is an environment where people trust each other	doing things behind someone else's back, trust each other, confidence, trust	*13*
6.	It is an environment where everyone is at peace	inner peace, all in peace	*10*
7	It's an environment with effective communication	cooperation with parents, dialogue, good communication, dialogue with the schoolmaster	*10*
8	It's an environment that is quiet	silent, calm, quiet	*6*
9	It's an environment that focuses on unique and inclusive education	inclusive education, exceptional education, individual differences, people with disabilities, autism	*4*

Source: Compiled by the authors.

Both students and schoolmasters were asked what they would recommend for implementing a positive learning environment in school education. These suggestions are presented in Tables 3 and 4. As Table 3 shows, schoolmasters focused predominantly on the concept of identity ("myself"). Thirty-one schoolmasters noted the importance of self-esteem, identity creation, and value. According to these schoolmasters, it is vital to compose a classroom identity for students. Twenty-five schoolteachers emphasized the importance of universal values such as tolerance, love, respect, and justice. Some schoolmasters noted that the physical characteristics of a positive environment need to be improved. Nine schoolmasters suggested turning learning into a fun form of peaceful education. Some schoolmasters noted about the necessity to prevent bullying and violence, while others made suggestions to government officials.

Table 3.
Schoolteachers' propositions for implementing a positive learning environment

№	Schoolteachers' propositions for implementing a positive learning environment	Qty
1	Propositions for "self-sufficiency"	31
	Schoolmasters should feel happy	
	Schoolmasters should increase self-esteem and confidence	
	Schoolmasters should feel valued	
	A classroom identifier should be composed for each student	
2	Propositions for values of a positive learning environment	25
	The schoolmaster should treat students fairly, and the principal should treat schoolmasters fairly	
	Values such as respect, tolerance, and love should be emphasized	
	Universal values should be taught	
3	Recommendations for physical characteristics of a positive learning environment	20
	School should not be a boring place; it should be turned into a place of recreation	
	The physical environment of the school should be improved	
	The school environment should be arranged like a home	
	Different classrooms should be created to suit everyone's interests in the school	
	Schools should be turned into campuses with many social facilities	
4	Propositions for relationships in a positive learning environment	17
	There should be communication between student and schoolmaster, similar to family-to-child communication	
	There should be cooperation with parents	
	Schoolmasters need to build good relationships with each other	
	There should be training to build trust between people	
5	Recommendations for teaching and learning while fostering a positive learning environment	14
	Fun activities for schoolmasters should also be organized	
	There should be a unique or individualized environment for each child	
	Students should enjoy learning	
6	Propositions for unwanted behavior in a positive learning environment	11
	Workshops on bullying should be organized	
	Strategies to prevent school violence should be developed	
7	Suggestions from MES and school administration	9
	School principals should be changed frequently	
	Excursion activities organized at school should be increased	
	School administrators should receive regular suggestions from students and determine their needs	
	We should hire professionally trained schoolmasters	

Source: Compiled by the authors.

As Table 4 shows, students focus mainly on the physical characteristics of a positive learning environment. For example, students want more playgrounds to make them feel at ease. Moreover, some students said they wanted to feel as comfortable at home as they did at school, so they proposed comparing school to the home environment. Finally, the students noted that everyone should respect each other. According to them, the source of a positive learning environment is rewarding for students.

Table 4.
Students' suggestions for implementing a positive learning environment.

№	Students' suggestions for implementing a positive learning environment	Qty
1	Recommendations for the physical characteristics of a positive learning environment	157
	The school should have playgrounds	
	School should be amusement, not dull	
	The school environment should be arranged like a home environment	
	The most popular personal items should be brought to school and placed in the right place in the classroom	
2	Recommendations for undesirable behavior in a positive learning environment	149
	Students should not beat each other up	
	No one should swear	
3	Propositions for the values of a positive learning environment	146
	Everyone should respect each other	
4	Recommendations for learning and teaching in fostering a positive learning environment	141
	Lessons should be fun	
5	Propositions for relationships in a positive learning environment	138
	Schoolmasters should be friends with each other	
	Everyone should have good friends	
	Even if people think differently, there should be unity between them	
	The principal should not yell at students	
	Schoolmasters should not be angry with students	
	People should not be angry and rude to each other	
6	Recommendations for rules in a positive learning environment	135
	No one should move while singing the National Anthem of Ukraine	
7	Propositions for rewards in a positive learning environment	112
	The school should give students gifts for their excellent behavior	
	The principal should give a surprise to the most brilliant student every day	

Source: Compiled by the authors.

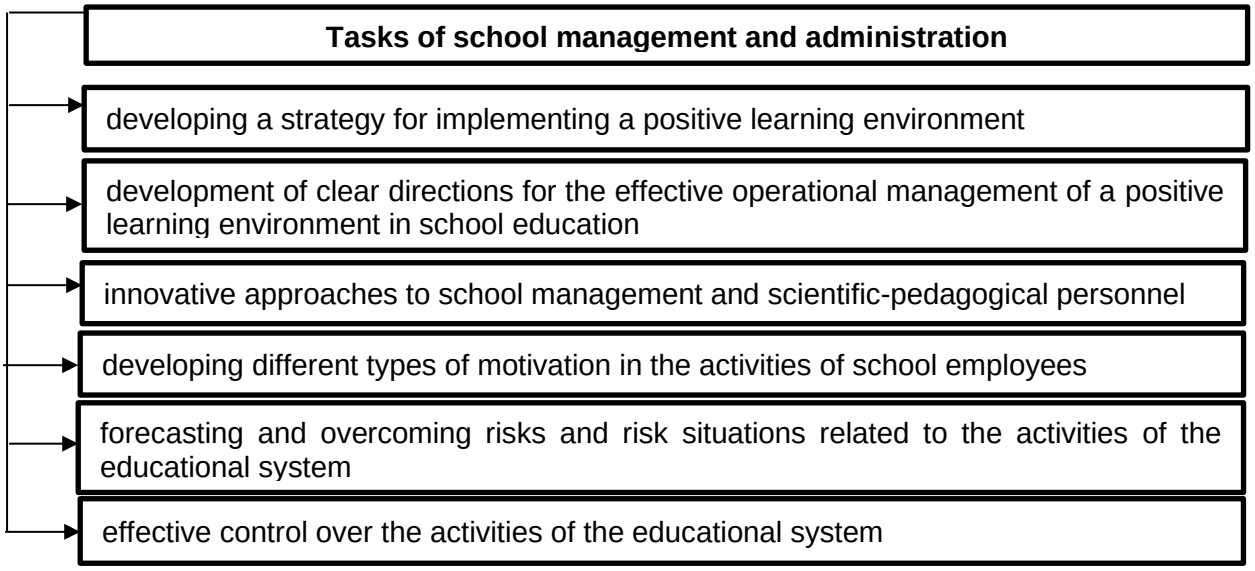

Figure 1. Tasks of school management and administration
Source: Compiled by the authors based on official data of Kalashnikova et al., (2020)

In this regard, the tasks of school management and administration for the implementation of a positive learning environment become necessary (see Figure 1). Fulfillment of these tasks will allow to fully implement a specific goal of school management and governance, as a consequence, to ensure the implementation of a positive learning environment in school education.

Providing a positive learning environment in school education will contribute to implementing 10 key competencies according to the New Ukrainian School Concept (see Table 5).

Table 5.
10 critical competencies according to the New Ukrainian School Concept.

№	Competences for primary school in Ukraine
1	*Communication in the national language* (and in the native language if different). Capability to express and interpret ideas, feelings, facts, thoughts, and attitudes in speech and writing: listening, speaking, reading, composing, and using multimedia
2	*Communication in foreign languages.* The capability to adequately understand concepts expressed in a foreign language, to communicate both in speech and in writing ideas, thoughts, feelings, facts, and attitudes
3	*Math competence.* A culture of logical and methodical thinking. Capability to use mathematical (numerical and geometric) methods to solve practical problems in different spheres of activity
4	*The main competencies in natural sciences and developments.* Capability to use scientific ways to observe, analyze, formulate hypotheses, collect data, conduct experiments and analyze their results

5	*Information and digital competence* involves confidence and critical appreciation in using ICT to produce, research, process, and share information in the workplace, community, and in personal communication
6	*The ability to learn throughout life.* The capability to seek and master new knowledge, acquire new skills, organize the learning process through effective management of resources and information flow, and the ability to evaluate one's learning achievements and learn throughout life
7	*Proactiveness and Entrepreneurship.* The capability to generate and implement new ideas and initiatives to enhance one's social status and well-being and the development of society and the nation
8	*Social and civic competence.* Capability to work with others to achieve results, prevent and resolve conflicts, and reach compromises
9	*Cultural awareness and expression.* The capability to appreciate art objects, form own artistic tastes, independently express ideas, and experience feelings for works of art
10	*Environmental literacy and healthy living.* The capability to use natural resources wisely and rationally within the framework of sustainable development, understanding the role of the environment in human life and health, and the knowledge and readiness to lead a healthy lifestyle

Source: Compiled by the authors based on official data of the Concept of implementation of state policy "NUS" (2016).

5. Discussion

It is clear from the results that students and schoolmasters in the schools want to unanimously improve the main issues related to implementing a positive learning environment in school education. Emotions and feelings are important to both groups. Both students and schoolmasters need to feel valued. Schoolmasters also dreamed of a school where everyone feels happy. In keeping with the study, physical safety is also an issue to consider. Children do not want schoolmasters or classmates to abuse them physically. Schoolmasters strive for a school without violence and bullying. Bully students intimidate other students with their words and actions. Bullies disenfranchise others by making other children feel unsafe and often causing them to miss school (Olweus, 2002; Olweus, 2003).

Universal human values are essential to a positive environment in school education. It is impossible to implement a positive learning environment in school education without respect, love, and tolerance. Schoolteachers and students have certain needs and expectations. The most basic need of schoolmasters is to feel valued. Students want a fun school environment. Relationships are a source of peace for both schoolmasters and students. Children wish to have good relationships with their peers, and they want to make good friends. Schoolteachers want to have good relationships with other colleagues, parents, and school administrators. In obedience to schoolmasters, people must trust each other.

Similarly, in a study by Slaughter-Defoe D. T. and Carlson K. (1996), children viewed schoolmaster-child relationships as the most critical dimension of school climate. Children

also noted schoolmasters' fairness, caring, and praise for effort and the importance of values, moral order, adherence to school rules, and good performance. Some children associated a positive learning environment with "human unity" (Oppenheimer & Kuipers, 2003).

Hakvoort (1996) emphasized the importance of positive social themes involving friendship and caring for others to understand a positive learning environment properly. In obedience to Koth C. W., Bradshaw C. P., and Leaf P. J. (2008), school size, schoolmaster characteristics, class size, and concentration of students with behavior problems are significant predictors of perceptions of a positive learning environment. These findings propose that aspects of the classroom environment are essential to consider when wanting to improve the school climate.

In obedience to the results of this study, schoolmasters and students propose that the physical school environment should be reorganized to make them feel more comfortable than they feel now. Both groups want to feel like they are in their own homes when learning at school. Children believe that extensive grounds are needed for a calm and happy school (Levin, 2003). Both schoolmasters and students believe that respect for differences and different ideas is a crucial element of a positive learning environment.

In obedience to schoolmasters and students, the academic environment is critical to creating a positive learning environment in school education. A positive educational climate is essential for peace. In obedience to schoolmasters, students should enjoy learning. Another crucial positive dimension related to school climate is rules and regulations. In obedience to the findings, adherence to regulations is necessary to support a positive learning environment in school education. In the school environment, everyone has responsibilities and liability. When these rules are violated, problems arise. Some research emphasizes the importance of school rules to combat unwanted student behavior (Gottfredson et al., 2005; Halstead, & Taylor, 2000; Malone & Tietjens, 2000; McGinnis et al., 1995).

There are many studies in the literature that support the findings of this study. Variables such as schoolteacher participation, support in classroom activities and decisions, relationships with peers, specific rules, physical classroom, and school environments that are characteristics of a positive learning environment have been identified to student and schoolmaster achievement (Brand et al., 2003).

Consequently, schoolmasters and students will face new challenges because the implementation of a positive learning environment in school education is quite a complex process, in-depth research that will lead to the increased focus on improving methods and techniques for effective implementation of the positive learning environment in school education.

6. Conclusion

As a result of the analysis of positive learning environments in school education, we found that due to the conditions of intensification of educational processes and the emergence of obstacles to the provision of traditional learning that require an urgent alternative solution, this process requires ensuring the development and implementation of a positive learning environment, where this topic is becoming increasingly relevant.

To implement a positive learning environment, schoolmasters can identify, plan, and implement preventive techniques to encourage positive student behavior and minimize disruptive classroom behavior. Schoolteachers must use effective strategies to create a positive learning environment in the classroom. For example, schoolmasters should take an active role in seating arrangements and ensure that students have an appropriate level of academic success. Class rules communicate expected classroom behavior in advance and increase the likelihood of success among students. Balancing praise with corrective feedback and understanding the impact of cultural differences to establish and maintain appropriate schoolmaster-student interactions is an important skill set for all schoolmasters. Practical strategies to compose positive school environments are vital aspects of a comprehensive classroom management program.

The practical significance of the conducted research: the conclusions and recommendations developed by the author and proposed in the article can be used to avoid obstacles in implementing a positive learning environment in school education and ensuring its future development.

Further research can improve the methods and techniques of implementing a positive learning environment in school education, which will stimulate the development of a positive learning environment and enhance the teaching activity in this learning environment, ensuring successful learning in school. Expanding the opportunities and broad application of innovative, research-based approaches to ensure the implementation of a positive learning environment in school education can become the basis for strategies for future periods.

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Media dimension of modern civic education: the humanitarian aspect

Dimensión mediática de la educación cívica moderna: el aspecto humanitario

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Abstract

The aim of the article: The aim of this article was to identify the humanitarian features of the use of media technologies in education. To achieve this goal, a analytical research was conducted on the topic of media in education.
Research methods and techniques: The historical and comparative-legal method was used to solve the issue. Using a comparative legal method, a comparative analysis of the level of using media in education was carried out.
Results: As a result, conclusions were made about the sharp increase in the level of use of media in various types in the process of civic education.
Conclusions: It was concluded that media have both positive and negative effects on consciousness of information. Active use of media technologies helps to recreate the learning process at a distance, involves the use of a variety of interactive activities. And, the constant use has a burden than the usual format of education. Therefore, the problem of teaching methodology of using media in education becomes relevant. As a result, it was determined that the topic of effective use of media technologies in the educational process is becoming increasingly important.

Keywords: education, human rights, information technologies, digitalization, education, teaching, media resources.

Resumen

El objetivo del artículo: El objetivo de este artículo fue identificar las características humanitarias del uso de las tecnologías mediáticas en la educación. Para lograr este objetivo, se realizó una investigación analítica sobre el tema de los medios de comunicación en la educación.
Métodos y técnicas de investigación: Se utilizó el método histórico y jurídico-comparado para resolver el tema. Mediante el método jurídico-comparado, se realizó un análisis comparativo del nivel de utilización de los medios de comunicación en la educación.
Resultados: Como resultado, se obtuvieron conclusiones sobre el fuerte aumento del nivel de uso de los medios de comunicación de diversos tipos en el proceso de educación cívica.
Conclusiones: Se concluyó que los medios de comunicación tienen efectos tanto positivos como negativos en la conciencia de la información. El uso activo de las tecnologías de los medios de comunicación ayuda a recrear el proceso de aprendizaje a distancia, implica el uso de una variedad de actividades interactivas. Y, el uso constante tiene una carga que el formato habitual de la educación. Por lo tanto, el problema de la metodología de enseñanza del uso de los medios de comunicación en la educación se vuelve relevante. Como resultado, se determinó que el tema del uso eficaz de las tecnologías de los medios de comunicación en el proceso educativo es cada vez más importante.

Palabras clave: educación, derechos humanos, tecnologías de la información, digitalización, educación, enseñanza, recursos mediáticos.

1. Introduction

The transformations that have taken place in industry over the last century, caused changes in the social, political and economic life of the world community and laid the foundation for the formation of the information society, have inevitably touched the sphere of education as well. The development of human civilization requires both changes in the training of specialists in various fields and specializations and, at the same time, changes in approaches to forms, methods and technologies in the educational process itself. Moreover, the rapidly spreading processes of globalization, in particular those which include migration movements, intensify cooperation between the states of the world in the humanitarian sphere, intensify their cultural, social, educational interconnections and interdependence. Nevertheless, despite the relevance of the research topic and the wide field for scientific research, the problem of using information and communication technologies in the educational process through the prism of the humanitarian aspect remains understudied. Therefore, there is a need for detailed research on relevant issues. The relevance of this work is determined by the need to study the use of media technologies in the educational process in the context of the humanitarian concept. Globalization, which is taking place in almost all countries of the world, is marked by technological progress. “Technological advances, especially communication and information technology, create the increasingly borderless world” (Murdiono & Wuryandani, 2021). Undoubtedly, they also affect the humanitarian sphere, in particular its component that provides the educational process, both in individual states of the world, and global educational processes involving all states. No less important is the aspect of multimedia in the educational process manifested against the background of the COVID-19 pandemic when the whole world was faced with the problem of limited social contacts and the need for isolation. So, media technologies play a significant role in education, especially during the crisis of the 2019-2022 pandemic. As a result of the Covid-19 coronavirus pandemic, the relevance and relevance of the use of information and communication technologies in all areas of human life, including education, has increased dramatically.

“The rapid development of media technologies and the expansion of their capabilities leads to the fact that the media are now present in almost every sphere of life and become, in modern conditions, a commodity of the industry of consciousness” (Rekun, 2020). However, noting the use of information and communication technologies during, for example, pandemic phenomena raises a variety of humanitarian questions. Thus, At the state level, however, the complex humanitarian issues surrounding the use of such media technologies have not yet been resolved. Governments at this stage are mainly focused on ensuring epidemiological safety during the educational process. In addition, there is an obvious increase in spending on education due to the introduction of information and communication technologies in the educational process, which is not always possible, especially when government funding is provided for more important social areas, such as health care during pandemic phenomena in the world. “Wenn Nachhaltigkeit in Zusammenhang mit Wirtschaft gestellt wird, ist eines der größten

Hindernisse deren starke Fokussierung auf den Konsum und dessen Steigerung" (Aniobi et al., 2021). Lack of funding also leads to the issue of using the most effective media to achieve greater effectiveness in the educational process remains underdeveloped.

Not only the issue of providing the state with multimedia tools for the educational process is relevant in terms of prioritizing the funding of certain social areas. With regard to students, teachers and educators, who are direct participants in the educational process, the use of multimedia techniques in the educational process also causes certain difficulties. We are talking about the issue of providing the subjects of the educational process with appropriate technological means and devices that would allow the use of information and communication technologies during training, as well as on the moral application of multimedia technology in it, which is associated with indirect interference in human privacy.

However, according to forecasts, the importance of information and communication technologies will grow every year. Every year the introduction of effective and innovative technologies in educational processes becomes more urgent. З іншого боку, необхідно враховувати те, що "Im Kern geht es um die Frage, welche Programme Werte für die Gesellschaft vermitteln und inwiefern nicht auch private Sender ohne einen entsprechenden Auftrag zum Gemeinwohl beitragen" (Meynhardt *et al.*, 2019). Accordingly, this necessitated an urgent study of this issue.

Especially under the conditions that, however, there are significant problems and unresolved issues in the field of media dimension in the educational process. As an example, we are talking about the use of social networks by schoolchildren and students can lead to institutional mistrust and negatively affect democratic values and behavior (Sandberg, 2018).

If we note the importance of information and communication technology in the learning process and its benefits, we must also note another disadvantage of multimedia learning, which directly concerns children. It is important to note that media technologies have a significant impact on the health of different age groups, and especially have significant consequences for the health of children. Thus, a dilemma arises: on the one hand, Under the the Constitution of Ukraine, a person, his life and health is the highest social value in the state, and from the other one, "the information impact on the Internet, the information wars of today have created a need to develop media literacy skills" (Kovalova, 2020). So, when it comes to the training of specialists with the help of information and communication technologies in the educational process, we must also take into account the medical risk, the use of which they contain.

The development of the information society poses new challenges to the world, however, it must be borne in mind that new technologies also conceal threats. Given the current threats in the information space, the issue of information protection and ensuring human rights to reliable information in the early twenty-first century is becoming crucial for both Ukraine and the world. In the conditions of hybrid war, the primary task of state policy is

to ensure the rights and freedoms of citizens, including information under Article 50 of the Constitution of Ukraine. This must be taken into account in the development and application of media technologies in the educational process. Also, the issue of development of media resources in the educational process is becoming increasingly important in connection with the European integration of Ukraine and in accordance with the Bologna Process. Accordingly, the humanitarian component of this issue becomes especially relevant in connection with the adaptation of national legislation in the field of education to European legislation. It is these factors that determine the relevance of this article.

The purpose of this article is to identify the features of historical and social development and the provision of media technologies in the educational process of educational institutions of different levels in different countries. According to the goal of the study, the following main tasks were defined:

This article defines the following tasks:

- determine the place of information and communication technologies in the field of education;
- to analyse the state of practical use of media technologies in the educational system;
- identify the main gaps and trends in the use of media technologies in the education system in different countries.

2. Theoretical Framework or LiteratureReview

Many works of world scientists have been devoted to the use of information and media technologies in the educational process in recent years. This indicates the growing relevance of this issue in the world. Accordingly, the problem of introducing technologies into the educational process has long been widely discussed in science, however, despite the scientific value of these works, they lack analysis and interrelation with the humanitarian sphere as a whole, as we pointed out above. The study of the sphere of education, the educational process, methods and technologies introduced in it, including multimedia, should take into account the humanitarian aspect, which is broad in its content and includes not only social, but also cultural, spiritual and moral-ethical cause-effect relations affecting the development of digital society.

Thus, “Research in 2017 notes that technological and economic development benefits a minority of the world's population, forcing universities to consider how transforming the innovation structure for inclusive development can help broaden their understanding of their “third mission” (Kruss & Gastrow, 2017). Accordingly, conditions in the national and local political environment intersect with the conditions of organization in universities and communities, as well as in the interaction itself, to produce results that affect livelihoods and development. This provision shows that all spheres of society are closely linked, especially when it comes to the education system, which not only provides the teaching

and learning process but also carries out educational work with the young representatives of the generation: pupils and students.

However, it is necessary to be very careful both for the representatives of the state authorities in the functioning of the educational system in the state, and directly to the teachers during the educational process, so that the education does not turn into the imposition of certain ideals, views and opinions on young people. Thus, the 2018 article states that propaganda poses a new challenge to civic education. The author explores the tension between education and advocacy for civic education for adults, considering civic education as a defence against attempts at advocacy and advocacy as a possible element of civic education. The main proposal of the article is to root civic education in the tradition of the German concepts “Bildung” and “Mündigkeit”, to oppose civic education to propaganda or manipulation (Kloubert, 2018). Information and communication technologies, used both during the educational process and outside of it, provide access to information of any content, but it is not always reliable and verified. On the other hand, free access to information through information and communication technologies contributes not only to the level of training of specialists, but also promotes their creative and intellectual search. For example, further in 2018 was determined that people's knowledge management, intellectual capital, organizational skills and organizational culture have a significant direct and indirect impact on innovation, emphasizing the importance of their simultaneous improvement (Chatzoglou & Chatzoudes, 2018). Thus, the development and implementation of information and communication technologies in the process of learning, stimulating and encouraging innovative practices also entails positive changes in the economy, which further demonstrates the close connection of political-economic and socio-cultural processes in a digital society.

Despite the obvious benefits, the introduction of new information and communication technologies in learning processes cannot completely displace those that have existed for many decades and have been tested in practice. Thus, in 2019, was pointed out “that the use of virtual technology can replace practice. Accordingly, systematic, scientifically sound technological knowledge is indispensable in the future world of work, but this is not enough to meet the requirements in practice” (Böhle & Sauer, 2019). The article identifies an important issue that educators around the world think about how best to prepare students with the knowledge, skills, attitudes, and behaviors to be informed, interested, and caring citizens of the 21st century.

Equally interesting to study is the experience of introducing media technologies into educational processes in those countries that have recently introduced them, following the completion of relevant political and social reforms. Thus, next article analyzed the evolution of media literacy on the example of Egypt (Singer, 2019). Accordingly, the author identifies that recent integration into the community requires digital skills, which have finally come to be understood as vital skills, along with reading, writing and arithmetic skills. Digital integration is no longer a matter of competence, skills or specialization, but, in fact, one of the common definitions is that media literacy includes

the ability to access, analyse, evaluate and transmit messages through a variety of messages (Roberts *et al*., 2019).

From another perspective, the impact of information and communication technologies in scientific work, which explored how they relate to cultural phenomena in society, as well as how they affect young people, which, as a social category, is their most common user. Another 2020 science work finds that the media is an arena for the discursive struggle for identity, culture and geography. The media organizes our ways of thinking and acting in relation to our perceptions and perceptions of "us" and "others". It was noting that with the spread of participatory information technology (young), media users reinforce or challenge media events through activities such as sharing, evaluating likes and comments (Hintermann *et al*., 2020).

A similar opinion to the previous one is expressed by Ovcharuk (2020), who notes, що identified the ability to use digital learning tools as a new technological basis for the development of self-education skills, forms a modern culture and a certain level of digital literacy. Digital competence is now identified as one of the key to lifelong learning and is reflected in the latest strategic documents of international organizations and European educational standards. The author focused on the introduction of «digital civic education» in European countries in order to encourage young people to develop digital skills and their use in the Internet, which involves personal involvement and creativity (Ovcharuk, 2020).

It is also necessary to pay attention to the Ukrainian scientists who researched the problems of interaction, influence and ways of effective implementation in Ukraine of training with the use of information and communication technologies. In 2020 was researching the communication dimension of the modern political system of Ukraine, is structuring the study of communication processes of the early twentieth century within three scientific schools: the first school is related to the study of media effects, the second school of «uninformed voters» specializes in electoral research, the third studies communication processes through socio-psychological studies of political consciousness. The author emphasizes that the selectivity of attention to the media and the predominance of the method of presenting information over its content showed the model of attracting attention. Examining semiotic models of communication, it was found that they endow it primarily with informational, expressive and pragmatic functions (Shlemkevych, 2020). Moreover, the author proved the influence of the development of information and communication technologies on the actualization of the value paradigm of social development.

Young people are the most active category of the population, actively using information and communication technologies, both in studies and in their leisure time. Next, in the same year was noting that there are very few studies directly on the impact on social innovation in universities (Bayuo et al., 2020). Further research, which creates a system

for measuring impact, will support the process of integrating social innovation into the mission of universities.

Confirmation of the importance of studying the peculiarities of the implementation of multimedia learning technologies in the educational process is the following scientific work. So the point is that the introduction of the latest technologies both in industry or economy, as well as in politics and education will be effective only if the active participation of the public of a particular country in this process. Also, in the science work was appropriate to identify that in developing countries there is a growing need to increase public participation. However, in order to reform civic education, it is important to understand the relationship between socio-demographic factors and civic activism (Ajaps & Obiagu, 2020).

Ми здійснили аналіз наукових праць за попередні роки, що висвітлювали проблематику запровадження інформаційно-комунікаційних технологій в освітній процес. Що стосується “the 2022 science work indicates that the existing literature is grouped around four main themes: articles on current citizenship issues related to digital development; technical and critical research of digital technologies in society; the consequences of digital innovations in the management of educational institutions; pedagogical approaches to the development of digital citizenship” (Cappellini *et al.*, 2022).

Thus, the issue of using information and communication technologies is multifaceted and is actively discussed in the scientific world.

3. Methodology

The goal and objectives of the study led to the choice of appropriate methods. The design of the study is formed on the basis of descriptive and quantitative research. This article uses general scientific and legal research methods, among which the historical method is important, which allowed to conduct a detailed study and analysis of the use of media technologies in education in historical context, as well as to study the genesis of the humanitarian aspect of media technologies in Ukraine. and foreign countries. Also with the help of this method the tendencies of media technologies in education to their further development and integration were investigated and analysed. Also, legal and comparative legal methods were used to study the information legislation of Ukraine and the European Union, and their practice in education and to explore the features and gaps in legislation, as well as their impact on integration processes in the humanitarian sphere. The study of statistical data in the article on the topic of the work was carried out with the help of official databases of educational institutions and countries of educational institutions in EU countries. Other participants were not involved in the research process. Ukrainian and foreign scientific and practical materials on the research topic are analysed. Among the researched sources, works were selected that allowed to study the history of the formation of the media dimension in the educational sphere of Ukraine, as well as the practical consequences of their application.

Further, an analysis of the social and legal foundations in the field of educational policy was carried out. Also, an analysis was made of the impact of national legislation and international acts on the development of the media dimension in the educational process. The research procedure included determining the relevance of this research topic, analysis of scientific and practical methods and approaches used to conduct research on the media dimension in the educational process, as well as its impact on the humanitarian sphere.

The study begins with a review of scientific sources for the period from 2018 to 2022 to analyse the main aspects and theoretical basis of European and Ukrainian humanitarian policies of media dimension in the educational process, and accordingly analyse different approaches. Also, it allowed to study the historical background and development of the use of media technologies in the educational process and to determine the directions of its further development. Next, a study of the relevant analysis of research papers and current regulations was conducted.

Further research suggested the selection of practical materials for research based on integrated approach, which allowed a comprehensive study of the article and identify the main problems and prospects. Thus, we conducted a selection of practical and theoretical materials in the field of media measurement in educational processes in accordance with the criterion of territoriality, which allowed to determine the state of development of this problem in different regions of Ukraine and foreign countries. Among them, the experience of the European Union played a significant role.

Next, we analysed the common and distinctive features in different countries humanitarian policies in the field of media technology in the educational process and identified obstacles to the formation of the Ukrainian educational and scientific sphere and based on the principles of EU countries. An important aspect at this stage was the study of the relevance of the European integration process and the goals of sustainable development in these regions.

Relevant monitoring of practical materials on the use of media technologies in the educational process in different countries for their comparison was conducted. As a result, based on the study, we formed conclusions and recommendations.

4. Results and Discussion

Life of a modern person in any sphere of his activity is difficult to imagine without the use of information and communication technologies: they accompany him during work, education, everyday life. Therefore, it is relevant to study those issues of multimedia processes and techniques, which are introduced into the humanitarian sphere of human life. This is obvious from the point of view that it is the closest to the person himself, his life and activities, for example, if we compare it with the sphere of political or economic life, in which the person takes part episodically. However, as we noted above, the

introduction of multimedia methods into the educational process through the prism of humanitarian understanding remains an understudied topic in academic circles. Analysis of research has shown that the media dimension of civic education is a relatively new area of research. The emergence and development of this area is associated with the formation and spread of information technology and media in human life. It is worth noting that due to the pandemic, the overall share of Internet access has increased in the EU (Table 1) (Eurostat, 2021).

Table 1.
Access to internet in EU countries.

Country	2017	2018	2019	2020	2021
Germany	93 %	94 %	95 %	96 %	92 %
Belgium	86 %	87 %	90 %	91 %	92 %
France	86 %	89 %	90 %	-	93 %
Montenegro	71 %	72 %	74 %	80 %	81 %
Austria	89 %	89 %	90 %	90 %	95 %
Bulgaria	67 %	72 %	75 %	79 %	84 %
Turkey	81 %	84 %	88 %	91 %	88 %
Croatia	76 %	82 %	81 %	85 %	86 %

Source: Eurostat, 2021

If you define what exactly is the basis for the creation of information and communication technologies, we are talking about information. It is the main driving force for the implementation of multimedia processes in the humanitarian sphere. Modern multimedia and computer tools, thanks to Web 2.0 technology, allow participants to participate in the creation of information. Accordingly, the participants in the process create their own existential space of the individual. Accordingly, people are not passive users of information, but are actively involved in creating information. Computer media technology has proved to be a carrier of human potential and a space for self-development.

The use of information and communication technologies has proven to be not only an effective way of providing methodological support for the educational process, but also a profitable business. The global e-learning market reached $ 101 billion in 2019. The total market is projected to grow exponentially by 2026, reaching more than $ 3.70 billion. The online learning industry is not showing any signs of slowing down.

The pandemic phenomena caused by the spread of coronavirus disease around the world, coupled with social distancing, led to the rapid development of multimedia learning, which was carried out through the Internet. In addition, the spread of such technologies has proved to be a convenient tool for people wishing to learn a new profession or upgrade their skills and abilities in their existing professions. Accordingly, there is an increase in the share of people involved in online courses.

For example, in Germany this is a difference of 10% from 2008 to 2021 (Table 2) (Eurostat, 2021).

Table 2.
Access to internet in EU countries.

Year	%
2008	2
2009	3
2010	3
2011	4
2013	4
2015	4
2016	5
2017	6
2019	7
2020	12
2021	12

Sourse: Eurostat, 2021

The emergence of new multimedia learning tools provoked the rapid development of information and communication technologies, the creation of new virtual learning platforms and cloud storage for storing information. The most effective ones turned out to be those that were user-friendly and also effective for methodological support of the learning process. Among the most common ways to use the media resource is the widespread use of online learning using the software Zoom, Google meet. Also, the use of hosting services is becoming promising in establishing information and communication interactions in the libraries of schools, creating something like media platforms. “Among them, it should be highlight that Social Sharing Services - web resources for storing and broadcasting information objects in various formats (PowerPoint, Word and Adobe PDF)” (Medvedieva, 2017). Services such as BlogCamp, meebo.com, comdi.com, webinar.ru, etc., are also important in the functioning of modern educational institutions. Moreover, media technology has led to the emergence of new forms of educational process, which poses a number of new questions to society.

At a time when the world realized that stopping the COVID-19 pandemic and leveling its effects on the economy and people's social life was impossible in the short term, multimedia education was supplemented with new information and communication tools through social media. Further, the use of modern programs such as Viber, Whatsapp to address organizational and technical issues in the learning process. Moreover, the use of video and audio content, illustrations and better learning is widespread in higher education, specialized, secondary and primary schools.

An important aspect of the media dimension is media literacy. Media literacy is based on knowledge, skills and trends in media competence. However, multimedia education has not only advantages, but also some disadvantages. We are talking, first of all, about the low level of multimedia literacy of the majority of the population, especially the elderly and elderly. For this category of the population proved difficult to master new information and communication technologies, as well as to use them. Multimedia literacy at the present stage remains an advantage for the population of young and middle-aged people all over the world. Media literacy is an acquired right for children and young people, so it should be adapted to each age group and each educational level.

In addition, multimedia training can act as an effective educational component in the learning process. Today, global economic and political factors influence children's behaviour and can contribute to aggression, violence, domination, depression, obesity, drug abuse and other negative effects on physical and mental health. “The most important way to counteract all these negative consequences is to teach children to look critically at what they see” (Cappellini *et al*., 2022). That is, media education is an important aspect of modern humanities education.

The development of IT skills in students and schoolchildren is increasingly encouraged in educational institutions. However, as we have noted, information and communication technologies conceal negative consequences for young people. In the era of information society and digitalization, there are significant information and communication risks caused by their development: cyber threats, piracy, fraud on the Internet. Of particular importance are threats to information security of countries in the context of modern information warfare. It is important to note that different countries have different approaches to regulating the use of media technologies.

Thus, it can be argued that in Europe, approaches are gradually developing to support and ensure the formation of media literacy skills in the educational process. The issue of innovative development in education is becoming increasingly important in the world community. Globalization, computerization, and cultural and political change have led to a significant need to review and improve the educational process. As a result, the relevance of this study is due to new societal challenges and needs, a number of media information and threats that have posed new challenges to the world community.

The use of media in the educational process has long been studied by scientists and practitioners around the world. At the same time, the pandemic of 2019-2022 significantly affected the implementation and development of distance education and the active involvement of virtual technologies in the educational process. Accordingly, the need to study the humanitarian aspects of the happiness of the media in education has led to the relevance of this article. The main aim of the article was to identify the humanitarian features of the use of media technologies in education in context of social changes in the world. The article shows that there are different approaches to the concept and value of Internet technologies, modern electronic devices and smaller media in the educational process.

Так, E-democracy and the information society have led to the transformation of the essence of traditional values of the educational process, and to the emergence of new information. Виникає питання, яким чином співіснують вже наявні технології у гуманітарній сфері з новими, інформаційно-комунікаційного змісту. Shlemkevych (2020) emphasizes that heredity in the transfer of traditional values in the information space is absent. This position of the scientist is quite justified, which can be confirmed by analyzing the experience of our country. Analysing the peculiarities of the introduction of information and communication technologies and online services in Ukraine, she noted the strengthening of the virtualization of society; reduction of personal contacts and exchanges; the predominance of consumption values over the values of cognition; production of values as goals values without the formation of a qualitative ideological paradigm of modernity; perception of the ideals of the Internet as one's own view of reality; transforming the role of e-democracy into a source of anti-values, including poverty; increasing the lack of bearers of modern values and, above all, the values of civil society, the social base of which is the middle class. “It turns out that postmaterialist values remain a prospect that is hampered by the dominance of economically determined survival values” (Hintermann *et al.*, 2020).

As we noted earlier, the humanitarian sphere of human life is multifaceted and multi-component. It does not exist in isolation and is in constant transformation and interaction of a transnational nature in order to meet the humanitarian needs and demands of society. On the one side, this creates a positive trend towards internationalization, access to education in any territorial conditions remotely. Programs, services, processes, products and partnerships can improve educational outcomes in innovative ways, such as personalized games on solar-powered tablets that teach math lessons to children in remote areas of the Sudan. Or digital learning platforms that teach refugees and other marginalized children the language of instruction in Greece, Lebanon and Mauritania. “Innovation in education means solving the real problem in a new and simple way to promote fair learning” (Hillman & Baydoun, 2018).

The need of the information society for new professionals, with more knowledge, with a more thorough general and professional, as well as professional competencies prompts the adaptation of the teaching and learning process to the realities of the new digital multimedia world. It is noting that the use of media technologies has contributed to a more open dissemination of information and exchange of experiences between students and teachers. Research in the United States has shown that students who were encouraged to discuss social issues in the open had a higher level of civic knowledge, political efficiency, political interest, civic duty, and expectations of voting. “Also, such students had the highest scores on the competencies of the twenty-first century, including economic knowledge, media interpretation skills and a positive attitude towards various groups” (Ovcharuk, 2020).

Accordingly, the formation of critical thinking skills and media competence has a positive effect on the level of development of a student or pupil, as well as contributes to a positive

experience of interaction in society. In addition, the availability of such skills in a specialist increases the level of his competitiveness in the labor market and gives certain advantages in the competitive selection of personnel over other candidates.

Multimedia training, the use of information and communication technologies in the educational process, as well as any other phenomenon in the world of political, social, economic nature cannot be solely advantages. On the other side, there are significant influences on human consciousness, factors that cause negative consequences for human health. “The constant use of media technologies promotes Internet addiction, impairs vision, promotes a sedentary lifestyle and complicates the perception of information” (Krutka *et al.*, 2017). Young people are particularly vulnerable to misinformation, manipulation and even hatred through the media, as young people spend a lot of time online and use content-sharing platforms such as Snapchat and YouTube as their main sources of information and communication. In recent decades we can observe the growth of cybercrime among young people, in particular, we are talking about cases of Internet fraud, illegal access to information resources, the use of unlicensed computer programs. Cyberbullying and dissemination of false information are also among the common cybercrimes committed by young people.

Therefore, scientists are actively discussing the best ways to involve media technology in the educational process. Despite the fact that in today's world access to education through the use of media technology may be limited due to lack of electricity, electronic equipment and access to the Internet. The United Nations Sustainable Development Goals stipulate that every child should have free, high-quality primary and secondary education. It is estimated that disruptions in education due to the COVID-19 pandemic have halted progress in education for 20 years. Although all students were affected by the pandemic, the gap between the privileged and those left behind has widened. In India, for example, one study shows that almost 40% of students in less-favored households could not study at all. The situation is similar in other states with low economies. The government estimates that about 30 million students do not have access to smartphones, devices or the Internet to attend school online. Many innovators are already working in communities. UNICEF is working with partners to identify, incubate and scale up promising innovations that help realize every child's right to learning. UNICEF is working with communities, schools and governments to create powerful, innovative education systems that improve learning for all children. Their efforts promote transparency by shedding light on education systems so that students, parents and communities receive the information they need to engage and hold decision-makers at all levels. Therefore, media technologies can create inequalities in access to education. The using media technology is raises significant humanitarian issues. It can be argued that multimedia learning partly creates a situation of inequality for the population of the world's poorer countries, whose population does not have the opportunity to use information and communication technologies in the educational process. It is also a peculiar violation of the human right to equal access to education, which is one of his or her fundamental rights and freedoms. At the same time, the skills of acquiring knowledge, skills and competencies for teachers and students to exercise and defend their democratic rights

and responsibilities on the Internet, as well as to promote and protect human rights, democracy and the rule of law in cyberspace.

There is also the unresolved question of whether the educational process should be fully multimedia, assuming that social pandemic restrictions will soon be lifted in the world. Particular attention is paid to the need to adapt tools using information and communication technologies for learning to the audience. And this adaptation should apply both to virtual communication with the audience and to the face-to-face format of classes.

“The importance of online tools used by teachers is versatile and used as a means of providing feedback to better understand their own strengths and weaknesses in the use of relevant technologies and to find their own ways to succeed” (Shlemkevych, 2020). The issues of transformation of the educational process in accordance with the challenges and requirements of the information society are also relevant for our state. Relevant new realities have become a real challenge for Ukrainian scientists and teachers. Accordingly, critical media literacy is an indispensable skill for both teachers and students. Thus, “the question arose about the formation of soft learning skills that would contribute to the effective assimilation of different tipes of materials” (Sarkar, 2020). This enables students to acquire relevant functional knowledge and skills related to the scientific processes necessary for the development of science and technology. Particular attention should be paid to the educational process that provides the disciplines of the natural cycle, the study of which involves a certain specificity. “Scientific education aims to find answers to the problems of understanding and interpretation of natural phenomena” (Udu, 2018). This applies to the teaching and learning of disciplines and other cycles, such as the humanities, because the main task of public education is the formation of research skills and access to knowledge about relevant processes. Thus, each child or young person can explore the world empirically, independently studying phenomena and processes with the help of information technology and develop appropriate critical skills.

Training of specialists of the new generation, which is a representative of the digital society, should not only be theoretical, but also include a practical component. Thus, in science education, students are encouraged to acquire and practice scientific skills. Today, the idea of science education is gaining momentum after its formulation by the US National Research Council in the document «Research and National Standards for Science Education» in 2000, the relevant standards were introduced. works in the USA. for STEM educational programs (science, technology, engineering and mathematics). In general, STEM-education is a modern continuation and result of interdisciplinary development of science and natural education, and in the form of STEAM-education, which contains all disciplines of scientific integration and is implemented through inquisitive learning. Thus, students develop strong skills of research and observation, analysis and conclusions. This in the future forms the basis for becoming a successful scientist in any field.

Extracurricular education plays an important role not only in training specialists with the appropriate level of knowledge and a set of relevant competencies, but also in raising a new generation with professional knowledge in the field of information and communication technologies. “In order to effectively implement modern trends in extracurricular education, as modern scientists point out, teachers need to implement innovative teaching methods” (Udu, 2018). “Among scientific innovations, attention is often paid to trends in STEAM education” (Kovalova, 2020). Not only instructors, but also those who provide the learning process, teachers, must have the appropriate multimedia and innovative methods and techniques to support the learning process. It covers a much broader concept, namely the successful combination of creativity and technical knowledge. Australia, China, the United Kingdom, Israel, Korea, Singapore and the United States have a long history of public STEAM education programs.

“In general, innovative educational technologies that can contribute to the development of transformation to spread scientific thinking to broader subjects and the formation of STEAM and innovative skills as key competencies of students” (Kovalova, 2020). Today, the United Nations Educational, Scientific and Cultural Organization (UNESCO) coordinates the implementation and development of the concept of education in the world. “In 1972, UNESCO encouraged the International Council of Scientific Education Associations (ICASE) to disseminate and improve the study of scientific education around the world, and today ICASE is a wide network of scientific associations from teachers, institutions and foundations in more than 75 countries, including Ukraine, which cooperate to promote science in the world” (Udu, 2018). No less important role in this process plays the introduction of the Bologna system of education, which also took place in Ukraine, which increases the level of teaching academic disciplines, the quality of skills, knowledge and abilities received, the transparency of their evaluation, as well as mobility and mobility among teachers, who have the opportunity to train or improve their skills, as well as among students with the opportunity to study, in a foreign country through educational exchange programs and projects.

As a result, innovative practices and technologies are tools that empower both students and teachers. By applying innovative methods, students 'needs are met, as this supports students' preferences for practical learning. Innovative practices are promising for teachers because they help teachers engage students in practical requests. Students' use of information and communication technologies can be considered as part of innovative practices. “When teachers and students fully embrace innovative teaching methods, students' academic performance will improve dramatically” (Starenkyi, 2019).

The importance of the media dimension and media education in society has been growing in recent years. Moreover, teachers, community institutions, community organizations, schools and families become involved in the learning process and can contribute to the development of education to achieve the goals of sustainable development. Civil society representatives play an important role in introducing multimedia technology into the educational process. Among them, higher education institutions play a fundamental role in training competent professionals who can work to achieve sustainability. Accordingly,

educational practices are promoted that help students realize the importance of active and responsible citizenship, which responds to the challenges of sustainability of the twenty-first century. “It may be necessary to change the paradigm that meets the needs, aspirations and concerns of students about sustainable development” (Díaz-Iso et.al., 2019).

In our opinion, in this case it is expedient to consider the experience of the Republic of Turkey: which in the context of the formation of information security skills conducts continuous education and training among the people of the country. There are several important regional security initiatives of which Turkey is a member: the Ministry of Defense of South East Europe, the Multinational Peace Force of South East Europe and the Black Sea Naval Cooperation Task Force. “In recent years, a number of events have been held with the participation of the United Nations, namely the United Nations Office for Disarmament Affairs, among which priority is given to human resources training, coaching and training” (Roberts *et al*., 2019). Over the last 2 years, more than 2,500 students have attended such cybersecurity training programs. Also, with the participation of Turkey, a cyberband laboratory has been set up to improve our curricula and provide more opportunities for action. The laboratory is also useful for measuring the level of knowledge and provides a certification program for visitors (National views and assessments of Turkey, 2019).

Accordingly, the development of media technology in the educational process has had significant consequences for the humanitarian sphere. Wide access to the Internet is one of the factors that has accelerated the introduction of technological innovations in the education sector. Ideas are spreading fast, and people can explore the best ways to use technology in education. Computer equipment manufacturers make devices such as laptops and tablets to meet specific educational needs. Another factor that will accelerate the pace of technological innovation is competition between different technology companies.

The key practical issue in education today, leading to a significant transformation of its established architecture, is how to achieve optimal results with available and possible means and resources.

As a result, as of 2021, it is necessary to form a well-established architecture in the educational process. The starting point of education should be the use of research practices based on scientific methods of cognition, the use of research as teaching methods. Thus, “learning should focus on creating an environment in which students are interested and motivated to conduct research to understand and explain the natural processes of this phenomenon” (Polikhun, 2018). Therefore, in our opinion, innovative activities in science education should be aimed at increasing students' interest and interest in their own research. Accordingly, students should then be introduced to research methods and techniques, as well as skills of observation, introspection and research results.

“Media and education for the future are combined in the educational concept of education for sustainable development, which for several decades aims to enable children, youth and adults to form (sustainable) present and future” (Schluchter, 2021). The end result of such learning should be a new way of thinking of students, when science is seen as a tool, a means of solving practical problems of man, family, city, world, state or on a more global scale.

As a result, the world today is on the path of total informatisation, which accelerates world trends and forms a new type of thinking, and as a consequence, a new type of person. Research on the impact of information technology media on people, in particular on the formation of the worldview of primary school children, remains promising. The issues of developing soft skills in working with information, in the context of combating misinformation and critical thinking, are also becoming relevant.

Consequently, the educational and scientific process began to depend on information technology and communication capabilities. As a result, many controversial issues remain that need to be explored and resolved.

5. Conclusions

As a result of the study we can conclude the relevance of this topic in the world. The development of media technologies and at the same time the increase of relevant risks has proved the necessity to use new approaches in humanitarian education. However, different countries have different approaches to their essence. Accordingly, this is due to both social and humanitarian factors, in particular, one of the most difficult problems for most countries in the world remains the problem of financing the implementation of information and communication technologies in the educational process, as well as the issue of priority of the sphere of education in comparison with other social areas and the needs of society at a particular time.

It is necessary to emphasize the importance strategy development, trainees to develop critical thinking skills during the educational process through the use of elements of media education. Media education creates an informed civic position and forms an independent personality, as well as enables the practice of various dimensions of modern learning. Media education is in close relationship, both with other spheres of public life in one country, such as science and culture, and in close cooperation with the field of education in all states of the world, given the globalization of the world and the new challenges that face the digital society.

It should be noted that for EU countries the pandemic of the coronavirus 2019-2022 was a difficult issue that contributed to the development and use of information and communication technologies. At the same time, it is necessary to define the European integration process, which led to the approximation of Ukrainian legislation and the practice of its application in the field of education to EU standards. The formation of students' skills while working with information technology and the use of elements of

information security is becoming increasingly common in the world. At the same time, there is a growing conflict in approaches to the possibility and scope of information and communication technologies. It should be noted that society have a separate problem in different approaches to regulating this problem within European countries.

Prospects for further research are to determine the characteristics of the impact of media resources on people in the educational process, as well as the need to develop skills of information culture.

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Introduction of the latest teaching practices and development of the educational process in the field of culture and art: the experience of EU countries

Introducción de las últimas prácticas docentes y desarrollo del proceso educativo en el campo de la cultura y el arte: la experiencia de los países de la UE

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Abstract

Research on the development of education in the field of culture and arts is an important topic in view of the transformation processes in the EU. Although European education is based on the Bologna system of education, it is improved by modern pedagogical practices with broad elements of modern technologies. The article aims to analyze the development of education in the field of culture and art through the prism of modern transformational challenges in the EU. Our study is formed on the basis of both general theoretical and empirical research methods. In order to characterize the current state of the field of culture and art, the universities of Germany, France, the Netherlands and Latvia were selected for analysis. The results conclude that the EU's joint regulatory institutions coordinate activities in the field of culture and the arts. Therefore, the main principle in the work of European universities is the emphasis on independent practical work of students and the development of individual learning trajectories.

Keywords: Education. Teaching. Culture. Art. EU. Cross-cultural communication.

Resumen

La investigación sobre el desarrollo de la educación en el campo de la cultura y las artes es un tema importante de cara a los procesos de transformación en la UE. Aunque la educación europea se basa en el sistema de educación de Bolonia, se mejora mediante prácticas pedagógicas modernas con amplios elementos de tecnologías modernas. El artículo tiene como objetivo analizar el desarrollo de la educación en el campo de la cultura y el arte a través del prisma de los desafíos de transformación modernos en la UE. Nuestro estudio se basa en métodos de investigación teóricos y empíricos generales. Para caracterizar el estado actual del campo de la cultura y el arte, se seleccionaron para el análisis las universidades de Alemania, Francia, los Países Bajos y Letonia. Los resultados concluyen que las instituciones reguladoras conjuntas de la UE coordinan actividades en el campo de la cultura y las artes. Por lo tanto, el principio fundamental en el trabajo de las universidades europeas es el énfasis en el trabajo práctico independiente de los estudiantes y el desarrollo de trayectorias de aprendizaje individuales.

Palabras clave: Educación. Enseñando. Cultura. Arte. UE. Comunicación transcultural.

1. Introduction

The development of the field of culture and art in the EU through the prism of modern changes and trends is a relevant topic of contemporary reflection and elaboration. For example, the modernization of general education, which is currently taking place in Ukraine, is associated with the introduction of the European state educational framework, built on broad psychological, pedagogical and conceptual principles that radically change the methodological approaches to teaching. Consequently, this requires some revision of

traditional methods of teaching academic disciplines, including subjects from the field of education culture and art. The relevance of this topic is explained by the fact that the modern humanities go beyond the classical for the XIX and XX centuries views This phenomenon has become especially noticeable at present when the integration of the humanities and features of the digital society has become urgent issues of formation of modern man, his development and adaptation to the changing conditions of cultural environment. Consequently, modern technological processes affect the development of many educational sectors and culture and art. At the same time, methodological transformations in this field lead to new methodological principles in teaching culture and art in schools and institutions of higher education. Let us note that a thorough analysis of education and science in the field of culture and arts in the EU countries demonstrates both problems and ways of their solutions in the European system (on the examples of Germany, the Netherlands, France, and Latvia). These ways of fulfilling the actual tasks are a vivid example of the development of this sector as a whole. Consequently, this article aims to analyze the latest practices of teaching and development of education in the field of culture and arts through the prism of transformational challenges in the EU countries.

2. Literature review

The theoretical part of the article is formed based on the analysis of modern historical and pedagogical literature. For example, Bista (2021) highlighted in detail the peculiarities of teaching art and culturological disciplines. The author focused on the importance of culture and art in the life of modern man. Buryakova (2022) analyzed the peculiarities of teaching and development of musical culture in universities in France. The author in her results noted that the modern model of university music education, the foundations of which were formed back in the Middle Ages, now has a number of specific features (University of Latvia, 2022). Among them, she singles out the following: a wide range of forms of diplomas and systems of their awarding; preservation of the high level of musicological training, the combination of the learning process with professional internships in various profile institutions and ensembles (Song, & Kim 2019); forms of organization of professional research under the guidance of several doctoral schools, etc. (Buryakova, 2022). Richards (2019) characterized the problem of multicultural skills formation in cultural studies students. Schonmann (2019) investigated the features of modern art education, characterized its importance and relevance in the modern world. Cultural and educational policies can contribute to the formation of skills necessary for personal development in modern multicultural societies, and they also influence the emergence of professional personnel in the artistic and cultural industries. This is confirmed by numerous studies of experts studying the impact of education (particularly art education) on human development (Anttila; Martin, 2019). The importance of culture and art in Europe is confirmed by the fact that the international organization UNESCO has officially outlined the importance of art and culture in the modern education system. In the European Union, the definition of cultural and educational policies falls within the competence of member states. However, we note that the EU also plays an important role in supporting education and culture by supporting member states financially and by

coordinating efforts in these areas. For example, in the 2006 Recommendation of the European Parliament, “cultural awareness” and the ability to express oneself in the meaning of transversal competencies are among the fundamental competencies of a modern person. The document noted that cultural and artistic knowledge contributes to fundamental knowledge of the development of local, national, or common European cultural heritage, determines a tolerant attitude towards the achievements of other cultures around the world, influences self-expression in different spheres, and the openness of intercultural communication (Maastricht University, 2022).

Currently, the European Commission continues to support projects to modernize the quality of European education. The importance of knowledge of culture and the arts is also evidenced by the fact that the EU includes principles for the development and protection of culture and the arts in its strategic goals and overall political priorities. We are talking about such weighty documents as the investment plan, the implementation of the EU-2020 Strategy, the future EU-2030 Strategy, etc. Note that an important task in the field of culture and art of EU countries is the formation of these sciences as a factor of consolidation policy (Anspoka & Kazaka, 2019). In particular, many European studios say that the center of mutual understanding between different models of European education should be a dialogue based on specific common cultural principles.

3. Methods

The study is based on the principles of using general scientific methods of research. In particular, the work focuses on analysis and synthesis, induction, and deduction. With the help of the comparative method, the peculiarities of teaching culture and art in EU countries are reflected. In addition, the article is based on the method of abstraction, which provides a transition from general facts to specific recommendations and conclusions. At the same time, certain attention is paid to the historical method of research (which traces the development of the object through the past transformational changes) and the prognostic method (which forms the vision of further development of culture and art in Europe). An important place in the work is occupied by empirical pedagogical methods of collecting and interpreting information

4. Results

Peculiarities of higher education in EU universities

As we have already noted, in the field of education the EU member states are quite independent, although they are based on common European principles and standards. Note that higher education in European universities is organized based on a three-tier system: Bachelor, Master, Doctor.

Let us analyze the peculiarities of teaching in the field of culture and art in Germany. Berlin is home to one of the most famous universities, the University of the Arts, which is

now considered one of the most prestigious in Germany. The history of the University of the Arts dates back to the founding of the Academy of Arts in 1696. Since 1966 its structure has included four faculties: the faculty of design, fine arts, music, and the faculty of historical art. Today the university is one of the most multidisciplinary institutions in Germany. Today, the four faculties offer more than 40 programs of study that include both art history and curricular aspects. Because of the multidisciplinary nature of the University of the Arts, students have the opportunity, through various projects and lectures, not only to explore the common features of the various academic fields but also to be exposed to a great variety of art forms. Every year the university sends students for internships, this is done so that they can practically understand the complex cultural and artistic issues. In addition, the university has the right to offer the best students a job. The institution has a special Career Center, which consistently informs not only its students or alumni but also students from other universities about job openings in the cultural and artistic fields.

In general, the study at the Berlin University of Art is focused on the formation of practical rather than theoretical skills in students. In particular, it organizes numerous conferences, exhibitions, art projects, open lectures, and various masterclasses by famous German artists. The university also has its own theater, where students of theater and music directions present their own performances and organize concerts. A separate place is occupied by the activities of the “Intercollegiate Dance Center”, covering many creative students and the “Berlin Student Jazz Institute”.

A visible place at Berlin University of the Arts is occupied by the faculties of design and fine arts. In particular, the Faculty of Design teaches such disciplines as architecture, design basics, design, visual communication, art and media, social and business communication. Thus, at this university great attention is paid to the formation of multicultural competencies of students.

The Department of Design offers a two-year master's program called Visual Communication. It includes such disciplines as graphic design, illustration features, exhibition organization, visual systems, advertising, and new media, which are studied over two years. Master's degree students carry out their research and art and creative projects under the supervision of faculty members. In addition, students are also required to attend or even participate in exhibitions of varying nature and scale. In addition, noticeable attention is paid to the scientific work of the student, which can be realized in the writing of professional scientific papers, projects, or participation in various conferences. The university has its own large library and media library, and students from low-income families and with little income can count on financial support.

At the same time, there is the Berlin Summer University for the Arts, which runs from early June to early October. Here students and everyone interested can attend numerous art seminars covering all the artistic disciplines taught at the University of Berlin, from fine art to design, music, and stage art (Berlin Summer University for the Arts, (n/d)).

At another German university, the University of Hamburg, too, great attention is paid to the development of the field of culture and the arts. It has a faculty of art that offers bachelor's, master's, and doctoral degrees. Students study art history, design, and the influence of photography and audiovisual media on the development of European culture. In general, undergraduate students acquire knowledge of art history and theory, problems of interpretation, and visualization of artistic works over six semesters during three phases of the undergraduate program (Schonmann, 2019). The first phase (introduction) lasts two semesters and consists of examinations in general art history, which is studied beginning with the Antiquity era and ending with the Middle Ages. The second phase lasts from the third to the fifth semester and is divided into three modules. Students study art history from the late Middle Ages to the present. A special course is the practically-scientific use of art, in which students learn how to write their first art-scientific works. In addition, students now also study the history, theory, and methods of using art history research. The third phase lasts from the fifth to the sixth semester and consists of one module in which the writing of a thesis is placed.

The University of Hamburg has both more practical and more theoretical disciplines. In particular, the more theoretical specialty is Art History. At the same time, in addition to the usual lectures, students are involved in art history conferences, archaeological excavations, etc. In addition, History of Art students complete internships in museums.

In the Netherlands, the teaching of art and culture is at a fairly high level. At Maastricht University there is a faculty of art and public sciences. The main focus is on the history of culture and art, with an emphasis on Western civilizations and their achievements. Students investigate the formation of Western culture, study the peculiarities of its art, science, technology, etc. (Maastricht University, 2022). In addition, the focus is also on political science and the study of media literacy. Students after the first year and a half of their bachelor's degree can shape their own curriculum by choosing electives. In the third year, a student may study abroad or complete an internship there. The Faculty of Arts and Social Sciences offers courses by modern educational requirements, including “Art, Literature, and Technoscience”, “Life in the Digital Age”, “Power and Democracy”, and “Cultural Pluralism”. A separate subject in Year 2 is “Academic Reading in Various Disciplines,” where students are introduced to various humanities and their subjects.

The University of Rotterdam also has a faculty of “culture and art”. The peculiarity of its curricula is its interdisciplinary approach, which focuses not only on teaching art history studios, but also philosophy, history, law, etc. In the curricula of Master's degree programs, the main attention is paid to the latest research methods in culturology and art criticism, actual problems of contemporary culture, questions of philosophy, and art theory. Thus, the programs of study of culture and art at the University of Rotterdam are characterized by versatility and a wide range of knowledge. In general, institutions of higher education in the Netherlands widely promote the academic mobility of students. This is especially relevant for culture and art students, who can gain valuable practical experience at major cultural centers and other institutions in Europe.

At the University of Latvia, the teaching of culture and art is carried out by the faculty of education, psychology, and art. This faculty is the largest structural subdivision of the University of Latvia that promotes the development of the most important humanities disciplines - educational sciences and psychology, as well as general and interior design, art, and cultural studies. The main focus of teaching at this faculty is the development of practical skills. At the same time faculty members take part in international academic and research projects, which are also opened to attract students (Faculty of education, 2022). Note that such an original synthesis of education, psychology, and art contributes to the formation of a solid base for the implementation of modern innovative and creative ideas. The main emphasis, therefore, is placed on the study of fine art and the general study of cultural studies. A significant aspect of teaching at the Faculty of Education, Psychology, and Art of the University of Latvia is teaching in English (taking place at all levels), which significantly internationalizes the learning process. Note that the structure of the faculty does not provide separate teaching disciplines of theater or musicology. The latter are integral parts of the general courses. Obviously, musical, stage, and choreographic education is concentrated in special narrow specialized institutions, such as conservatories.

Another university in Latvia, Daugavpils, has five faculties, among which is the Faculty of Music and Art. Here education is oriented in a more practical direction. At Daugavpils University the musical art acquires special importance, where the practice of students in the profile institutions of the country is actively organized. Note that the current program has developed a new course in musicology, designed for doctoral candidates. It has been formed based on new research methods, with special attention to the independent activities of applicants. In addition, the training of master's students is also aimed at the formation of practical skills. This is vividly demonstrated in the “Vēsture. Maistra Programa” of the Faculty of Music and Art. We think that this is a good example of education in Ukraine, where the emphasis is on theoretical training with little attention to the independent and practical work of the student. At the same time, the analyzed university actively supports the academic mobility of both students and teachers (Schonmann, 2019). In particular, Daugavpils University cooperates with universities in Germany (Rostock, Münzer, Mainz), Austria (Clarenfoot University), Denmark (Aarhus University), Lithuania (Vilnius University), France (Eury University), Ukraine (Shevchenko Kyiv National University), Finland (University of Helsinki), etc. Daugavpils University annually holds many art conferences where both students and teachers can present their research. In particular, the annual conference “Musicology Today: Constant and Changing”, which is attended by experts from around the world (Belgium, Belarus, Russia, Lithuania, Poland, etc.).

A separate place in our study is occupied by the characteristics of the teaching of musical culture in European universities. In particular, the content of university education in musicology in France includes the study, analysis, and synthesis of the evolution of musical styles, forms, musical language, social aspects of the practice of musical art, and studies of the relationship of musical culture with other arts, humanities and social sciences (Bista, 2021). At the same time, let us emphasize that to study at French

universities with a musical focus requires musical training with a minimum level of the 2nd year of the conservatory. At the moment of enrollment, the future student must pass a special examination confirming his level of knowledge in solfeggio, singing, playing an instrument.

At the University of Paris, along with other courses, there is a musicology course that includes a block of such disciplines as music history, musical language, music education, which are supplemented by so-called “transversal” courses (foreign language, history, computer science, management, sociology, pedagogical psychology) and elective courses (acoustics, organology, ethnomusicology). If in Paris at the baccalaureate level internships are not obligatory, the study at the master's level includes mastering theoretical, methodological, and applied knowledge with obligatory internships.

Note that since 2004 the educational system in France has undergone changes due to the final implementation of the Bologna Process. As a result, two levels of specialists' training were approved - Bachelors and Masters (as it is stipulated by the Bologna Declaration). So, the state diploma of a specialist from cultural studies has a Bachelor's level, which is obtained in 3 years of training: Bachelor or Bachelor in professional direction (Bista, 2021). The master's degree is 3 years, during which time the student can earn a master's degree in a professional area or complete a research master's degree. A doctoral degree can be obtained in 3 years of study, but the diploma is only research.

A similar structure, with minor modifications, we note, is inherent in all modern European universities. The Bologna training system has demonstrated its effectiveness and has been adopted not only by EU member states but also by the governments of third countries.

Consequently, we believe that the teaching of culture and art in the EU countries is more integrated and focused on the practical activities of students. We believe that this is an effective practice and a good example for other countries, in particular Ukraine, where theoretical teaching predominates. In addition, students of EU higher education institutions have free access to exchange programs and teaching in English (even in Latvian universities) significantly improves the adaptation of students in other European institutions or specialized institutes. However, we note that, unfortunately, in Ukraine students and applicants are less active in seeking foreign internships and training. Therefore, we believe that Ukraine should pay significant attention to courses to be taught in English, which will improve both the language skills of students and their mobility. In addition, an important aspect of reforming the modern training system of the culture and art industry in Ukraine is to turn not to theoretical, but to more practical training.

5. Discussion

We believe that when teaching culture and the arts in high schools, it is important to follow some principles when presenting the material. First, the principle of cyclicality remains important: the presentation of educational material, in this case, is fundamental. A number of cultural and historical changes or artistic masterpieces must also be reinterpreted. Many European institutions of higher education provide for a purposeful return to past materials (Andersone, 2020). We believe that this partly corresponds to the peculiarities of aesthetic development and ensures thorough memorization of the material without scholastic rote learning. In the perception of the majority, the study of culture and art is associated with two types of aesthetic activities: perception of the material and cognition of the theory and methodology of research (Anttila & Martin, 17 Sept. 2019). However, modern research studios prove that the interpretation of the obtained results in independent work remains as an integral component of the aesthetic development of students (Anspoka & Kazaka, 2019). Thus, in many European universities, the emphasis on the student's independent practical activity remains a priority.

Meanwhile, the variability in the construction of materials on each topic is a fundamental position of the art history subject concept. This variability manifests itself in the possibility of independent choice of the object of reflection or the technique of performing certain tasks (Schonmann, 2019). On the other hand, it affects the orientation of students in the search for original figurative solutions. The teacher in this situation should act either as an expert or a kind of motivator. Thus, the pedagogical activity of a teacher of disciplines in the field of culture and art should stimulate the formation of sustainable interest of students in the subject of comprehension, contribute to the education and development of the scientific and creative potential of students. The main task of the teacher is to use various ways and methods to improve the effectiveness of the learning process (Bolden; O'farrell, 2019). We believe that in the process of teaching art history, stage, musicology and other culturological disciplines the highest productivity have those forms of learning activities in which the assimilation of knowledge involves the organization of the joint solution of creative tasks. Such forms of activity are called “situations of joint productive action”.

One of the important elements of contemporary education in the field of cultural and art history is the choice of personal paths by applicants for education, i.e., the realization of the student's personal potential takes into account his/her abilities, interests, needs, and motivation, opportunities, and experience. Through the disciplines offered (usually offered at least 25% of the total number of academic subjects), the types, forms, and pace of education chosen by the applicant are taken into account. Accordingly, university teachers form a list of educational programs and syllabuses of educational disciplines of different levels of complexity, taking into account modern methods of teaching (Richards, 2019). Attention to this component of education in the EU countries is only increasing from year to year, which is due to the constant changes in student preferences, which in the realities of the XXI century seek to master the work with the latest multimedia technologies. These trends are also relevant in the study of art, where the percentage of

subjects related to journalism, or the IT field is increasing (Hussin, 2020). Obviously, these popular additions will also determine the vector of education in the future, and old methods will have to be replaced by the latest more technological solutions that define the face of pedagogy of this century. Changes in the teaching and in the whole educational process in European universities are taking place as a result of the rapid development of modern media technologies and the intensification of learning. Art disciplines and cultural studies are not exceptions in this matter, as can be seen from the analysis of the curricula of the leading universities. Let us note that the implementation of the Bologna system of education has become only one direction of evolution. Modern requirements for learning dictate a student-centered approach, providing broad autonomy in choosing an individual trajectory of study (Richards, 2019). This process has two sides of the coin. On the one hand, the educational aspirant has the opportunity to adjust the educational process according to his or her own interests, experience skills, etc. On the other hand, there is no way to determine how one or the other academic subject will be useful in continuing training. We are talking in particular about the fact that many students find it difficult to navigate a large list of elective courses, even if access to syllabuses or coursework is as convenient as possible. In our opinion, this is caused by certain “clipped” ideas about education and difficulty in understanding one's professional future (Cusati et. al., 2021).

We believe that overcoming such situations requires the additional introduction of elements of media competence into the educational process, i.e., the ability to work with modern information resources. This will avoid the dangers of fragmented knowledge in different subjects, particularly in the rather delicate discipline of studying art history, choreography, musicology, etc. During the summer, this university is a good platform for artistic exchange and to broaden your own professional horizons. In addition, the Summer University program also includes master classes for everyone. Here teachers, artists, designers, creative entrepreneurs, and other experts from other disciplines teach various courses, among them “communication and communication”, “career planning and self-marketing”, “creative entrepreneurship and organization” as well as “art management” (Universität der Künste Berlin, N.d.). Another tangible problem of contemporary art education is cooperation with stakeholders. The realities of the twentieth century prompted an active collaboration between the private sector and the public sector, but in the XXI century, the emphasis should probably be on seeking work in the private sector. Accordingly, representatives of business, charities, or NGOs should have had greater access to participation in the formation of initial plans.

Some experience in implementing such a system can be found, for example, in France, which trains rather versatile “dual” professionals – “intervenant” (teacher-intermediary or teacher-performer) (Buck, 2019). This diploma makes it possible to find employment in a large number of institutions: a music school or conservatory, socio-cultural centers or other musical structures (ensembles, theater or opera groups, orchestras, musical associations, specialized institutions (for example, kindergartens, hospitals, cultural centers, etc.) (Hussin, 2020) This allows individual teachers, young university graduates,

to find employment with a high probability (for some specialties - even 100%). Consequently, involving the broader community in the planning of learning activities is an important educational process that is just being tested.

6. Conclusions

Thus, education in culture and the arts is an important part of the educational process in Europe. At the same time, the knowledge obtained from this field is one of the sources of information about national dignity. It has also been established that the study of culture and art is an important way of legitimizing the existing social and cultural principles, which affects their status in the XXI century. At the same time, in the educational processes of teaching culture and art in Europe the principles of consolidation will dominate, that is, the development of common perspectives on specific problems. In the European universities the new practices of teaching are applied, the relevance of which is caused by the modern transformational challenges. Although the definition of cultural and educational policies is the competence of the governments of the EU member states, common regulatory bodies coordinate activities in these areas. For this reason, the main priorities in the work of many European universities are the emphasis on students' independent practical activities and the formation of a personal learning trajectory. Note that education is carried out under the Bologna Process, but the leading universities of the Old World (Germany, Netherlands, France, Latvia) also support academic mobility. Despite all the advantages of the European model of education in the field of culture and art, the issues of acquiring additional media competencies and the future employment of graduates remain problematic. However, we believe that EU countries are implementing active reforms that contribute to overcoming these negative trends, in particular through mechanisms of greater involvement of stakeholders in the formation of curricula and syllabuses. The following mechanisms of implementation of these policies are relevant problems for further studies.

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Development of modern sociological education in Ukraine: problems, prospects

Desarrollo de la educación sociológica moderna en Ucrania: problemas, perspectivas

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Abstract

The aim of the article: The article is devoted to the characteristic features, problems, and prospects of sociological education in Ukraine. Research methods and techniques: Theoretical and sociological level used the method of generalization own experience of teaching sociology in institutions of higher, in general sociological education in Ukraine, its characteristic features, problems and prospects of development. Results: Moreover, the functional components of sociological education are analyzed. Conclusions: An important aspect of the development of the Ukrainian professional educational sector "Sociology" is the search for optimal ways of selecting qualified teaching staff.

Keywords: sociological education, quality of education, specialists in sociology, educational process, Ukraine.

Resumen

El objetivo del artículo: El artículo está dedicado a los rasgos característicos, los problemas y las perspectivas de la educación sociológica en Ucrania. Métodos y técnicas de investigación: El nivel teórico y sociológico utilizó el método de generalización propia experiencia de enseñanza de la sociología en instituciones de educación sociológica superior, en general en Ucrania, sus rasgos característicos, problemas y perspectivas de desarrollo. Resultados: Además, se analizan los componentes funcionales de la educación sociológica. Conclusiones: Un aspecto importante del desarrollo del sector de la educación profesional ucraniana "Sociología" es la búsqueda de formas óptimas de selección de personal docente cualificado.

Palabras clave: educación sociológica, calidad de la educación, especialistas en sociología, proceso educativo, Ucrania.

1. Introduction

Profound social changes in Ukrainian higher education contributed to the development of the educational process in the country according to new principles, which include: a profound respect for the individual, his needs, and cognitive abilities. Also, social education gives impetus to the development of the Ukrainian society, people, and state as a whole. Sociological education in Ukraine is an important area of formation of a new generation based on the latest educational methods. However, many unresolved dilemmas require comprehensive scientific research in the framework of the following article. The debates on the development of sociological education concern many aspects, in particular, its content, structure, and the prospects of scientific developments in this sphere.

Ukrainian sociological education is a new social institution in society, the purpose of which is to receive, accumulate and transmit scientific developments in the field of sociology, as well as to train future practicing sociologists.

The social essence of education consists in revealing theoretical and practical aspects of humanitarian impact on personality, society, and state. Consequently, it is important to investigate, on a scientific level, the functional component of the educational process in sociology.

The purpose of the article is the analysis, scientific study of the essence and problem aspects of the emergence, existence, and subsequent prospects for the development of sociological education in Ukraine.

2. Literature Analysis

In the scientific literature, the first understanding of the concept of education was described in the writings of (Durkheim, 1956). He proposed the term “education” and described it as a separate social institution and mechanism of influence on society and social activity, which is connected with their different spheres: political, religious, socio-economic, ideological (this connection is two-way) (Durkheim, 1956, p. 112).

In the understanding of Parsons (1967) education as a social institution is closely related to its scientific development “quadra” (the unity of the four imperatives: integrative adaptive, purposive, and latent components).

The basis for the scientific understanding of sociology was laid by the famous sociologists Durkheim (1956) and Weber (1994). In their circle of scientific interest were the functions of education, their impact on the educational process, and the relationship of sociology with economics and politics. Education is an important factor in structural changes in society and global transformations (Hrabovets et al., 2020). Also, scientific reflection on the essence and content of sociological education was carried out by sociologists Serikawa and Moura (2019), who defined education as a set of social transformations in recent times and attempts to find new answers to current social problems (p. 2205-2221).

A reflection on the sociology of education was carried out in research papers by Moraes and Leiro (2016). The authors noted that the social education of young people will qualitatively affect all spheres of life and is important and necessary for the harmonious development of society as a whole (p. 1626-1644).

The position of Lobanova et al. (2021), who analyzed education as a social institution. They identified the following functions of this social institution: professional growth of young people, training of qualified specialists, socialization of people, and development of spiritual life in society.

In the modern realities of development in Ukraine, sociological education has formed as a social institution and a basic component in the system of higher education. In this regard, the task of sociological education is the accumulation of theoretical and practical knowledge in sociology, as well as the effective training of future specialists in sociology. Sociology as a direction of professional training in the system of higher education is relatively young (Sysoieva, 2018). The beginning of the formation of the first sprouts in the professional field of “Sociological education” a number of authors allocate to the mid-80s of the XX century when sociology departments appear in universities (Klimova, 2016, p. 34-43).

It is assumed that sociological training was not carried out in institutions of higher education in accordance with the dominant action of ideological propaganda in society. There are reasons to put forward the hypothesis that sociological education lacks a tradition of training young specialists, a small number of theoretical and practical developments, as do a number of related humanities specialties, such as: law, history, journalism, philosophy, etc. Consequently, it can be argued that this has led to the formation of numerous new approaches to the study of sociological issues directly in the process of learning and teaching subjects in the specialty of “Sociology”. However, this does not mean that sociological education is less valuable to society. Sociology as a science, as an academic discipline, fulfills an invaluable function in our opinion: to form in people a value, a worldview, and a culture of adequate social relations in general and between individuals separately.

In addition, it provides a concept of society, scientific and practical skills of tolerant behavior in it, explains the formation of public opinion, and justification of the action of social laws in society. The great scientific and applied potential of sociological education explain its considerable prevalence in developed foreign countries, such as the USA, Canada, Sweden, Germany, Norway, and a number of others.

As for the creation of quality educational programs in educational institutions where sociology is not a major, it should be noted that sociology is now included in students' educational programs along with other humanities disciplines, namely: political science, logic, religious studies, history, and others. The connection between sociology and the above disciplines is mediated by the fact that sociology is singled out as a key component for the study of the surrounding world and its society studied within these academic subjects (Durkheim, 1982, p. 209-210). Through mastering the discipline of Sociology young people have the opportunity to join the systematic analysis of the concepts of “society”, “social relations”, “crisis in society”, “social values”, and on this basis to develop methods of effective impact on society and the formation of civil society and prospects for further development (Khyzhniak et al., 2021).

In this connection, first of all, the qualitative training of future specialists in sociology is urgent. The obstacle to this goal is, first of all, organizational and methodological dilemmas. According to the prescriptions of the state normative standards in the sphere

of education in higher educational institutions of non-core direction, a small amount of academic hours for studying the subject “Sociology” in the range of up to fifty-four hours (Bartosh, 2022) is provided.

However, even this small amount of academic hours in training sociology specialists is not fully provided (it is reduced by necessity to fit into the total volume of the curriculum for the specialty). In addition, an important problem of the quality of education in non-core institutions of higher education is that the teachers there are those for whom sociology is a second specialty (not a major) and received it, as a rule, based on their first education. Therefore, the quality of teaching differs considerably from institutions of higher education, which employ qualified sociologists who received this specialty as their major. The situation with teaching sociology in non-core educational institutions could be remedied by professional development courses, as well as the participation of scientific-pedagogical employees in scientific-practical events: conferences, seminars, webinars, etc. (Klimova, 2016, p. 34-43). Therefore, the level of academic development of “Sociology” science and the quality of its teaching for future sociology students do not coincide. This increases the need for quality training of the teaching staff of non-profiled institutions of Ukraine in sociology direction.

3. Methodology

Theoretical and sociological level used the method of generalization own experience of teaching sociology in institutions of higher, in general sociological education in Ukraine, its characteristic features, problems and prospects of development. A detailed analysis of the peculiarities of using the methodology of teaching sociology as an academic discipline was carried out. The following general theoretical methods of research, such as methods of comparison and abstraction analysis and synthesis, were used in this exploration. As a result of using the method of comparison it was possible to analyze the functional components of sociological education in Ukraine, to reveal sociological education as a social institution and its interrelation with the formation of the market of professional sociologists in Ukraine. It is correct to note the use of the method of abstraction in this work, because the latter implies the transition from generalization to conclusions and recommendations. The critical analysis of curricula and programs promoted formation with the purpose of increase of interest of students in results of their training, promoted formation of clear recommendations of introduction in the higher school in a direction "Sociology" of a principle of electivity of educational courses. After all, the information era is characterized by a wide integration of previously incompatible areas of human knowledge, such processes are also characteristic of the modern education system. It should be noted that the methodological basis of the article was the works of coryphaei and modern leading sociologists and educators. Primer analysis of theoretical views on the development of higher sociological education has shown that at present there is a widespread lack of sociological study of this problem in a comprehensive form, taking into account the impact of globalization processes, modernization of education and the influence of modern information society on higher education. The latter, namely the social relations arising in the process of providing

sociological education, its development and improvement of pedagogical processes became the object of our study.

4. Results

At present, the educational process in institutions of higher education in Ukraine in the sphere of training sociologists creates an urgent need to solve two basic problems. The first educational problem in the sociological field is the creation of high-quality educational programs in educational institutions where sociology is not a major field. The next is the creation of a competitive sociological education that would enable our specialists to get a high professional level and work both at the Ukrainian labor market and the possibility of internships abroad.

Thus, let us analyze the above-mentioned educational dilemmas.

The teaching of sociology also overlaps with global dangers. In particular, Professor Michael Burawoy of UC Berkeley (USA) believed that the phenomenon of inequality is an important sociological problem. From such positions the scholar repeatedly spoke at ISA World Congresses of Sociology "Finding Inequality in a World: Challenges for Global Sociology. In particular, based on the study of the main trends in the development of university education, the issues of its commercialization and the process of formation of the "precariat" in the educational and training environment are noticeable. It is inequality, according to the scientist, that plays a key role in modern social-transformation processes and forces people (especially young people) to actively participate in the space of political life. It is important that this theme was noted not only by sociologists. In particular, according to M. Burawoy, Pope Francis I also repeatedly touched on inequality in his sermons. The American sociologist also drew on the works of prominent economists, in particular Tom Piketty, who considered inequality an indispensable attribute of economic growth. At the same time, inequality does not disappear with development, but only worsens. This also affects possible access to university education. As M. Burawoy has identified, there are two strategies of survival for institutions. The first is to obtain external financial support (voluntary donations from alumni or charitable organizations, funds from research, tuition increases, etc.). The second is to maximize savings in the educational process, particularly at the expense of faculty members. At the same time, humanities disciplines (including sociology), in both cases find themselves in a risky position, because the modern market is set to support other specialties.

Note that there are other views on the culture of sociology and its importance. Accordingly, the task of sociology is to investigate these complex processes, so the importance of this science will not disappear over time. If we turn to the second problem of sociological education in Ukraine, it is worth noting that we are now only on the way to high-quality training of future specialists in sociology. In this case, there are many unresolved educational dilemmas and questions. To date, higher educational institutions

have trained scientific and pedagogical workers in the field of sociology (Koniuchenko, 2019).

It is appropriate to emphasize that the need for professional sociologists in Ukraine is increasing. Therefore, the search for optimal ways of developing quality education for future sociologists-practitioners is especially relevant now (Kalashnikova; Chorna, 2021, p. 1-11).

As we noted above in our work, there is a layer of unresolved tasks and questions. At the first stage of training to become a sociologist, students complete four years of training and, as a result of final examinations and qualifying papers, receive an educational document - a bachelor's degree, which certifies the basic higher education in the field of sociology. Then the graduate can get the next degree of qualification, to study for a master's degree in sociology, receiving the corresponding state diploma. As for the observance of methodological and organizational aspects in the educational process of sociologists, everything is carried out in compliance with all norms of the current legislation in the field of education.

There is reason to reproach the inaccuracy of the content of the curriculum and the quality of students' assimilation of the provisions of the latter, namely the lack of additional methods and forms of conveying to future professionals the best scientific and practical recommendations that they can use in their practical activities.

In addition to the basic subjects for the course, the educational program includes additional special disciplines designed to provide answers to specific issues in the work of sociologists. The study of the 20% of disciplines will ensure the future emergence of highly qualified specialists in sociology. However, there is now a significant dilemma as to where to find teachers who will be well prepared not only theoretically, but also practically.

The curriculum for future specialists in sociology should include, in addition to the basic subjects, also special disciplines that help to root a set of necessary skills and knowledge for further work in this field.

We have summarized that the structure of the curriculum for sociologists includes a complex of almost a hundred disciplines, among which 80 percent are basic, and 20 are special courses of free choice. These are common features of sociological education, but certain Ukrainian institutions of higher education are described as characterized by their individual specificity and a certain proven pedagogical approach. The material to be studied is subject to structuring; accordingly, the basic subjects and special courses are divided into five main parts, each distributed over three hundred academic hours. These include the theory and history of sociology, the methodology of sociological research, branch sociology, and special courses. The amount of time for studying branch sociologies and undergraduate special courses is recommended in a shortened version. However, many practical classes are organized.

The quality of teaching and students' learning is directly dependent on the skills of the teacher, his desire to convey the essence and promote sustainable interest in the subject. The question of the correctness of the choice of one or another method of teaching in the context of the theme of the lesson and the individual qualities of students, because it has a significant impact on the quality of Ukrainian sociological education as a whole, requires a careful attitude of researchers lately (Bartosh, 2022; Kalashnikova; Chorna, 2021, P. 1-11).

The end of the twentieth century was marked by the search for active methods in the training of future sociologists. These, in turn, led to new pedagogical approaches that stimulated motivation and sustained motivation for student learning. This had a significant effect and high pedagogical achievement in the sociological field (Blackledge & Hunt, 2019, 1-4).

The quality of higher education and the level of students' assimilation of sociological knowledge determines a set of scientific and practical pedagogical techniques, which the teacher chooses depending on the topic of the class and the audience. Here the interactive approach comes to the rescue, which involves a combination of classical pedagogical approaches and active methods of pedagogical interaction between the teacher and students (Pak, 2018, p. 103-112).

The content of the interactive approach is a combination of several components, namely: ready-made information blocks plus qualitative connection between them, as well as a variety of text and multimedia files that form in the student's mind a whole picture of educational material on the selected topic (Kalashnikova & Chorna, 2021, p. 1-11). Consequently, the quality of higher education can be assessed by three key parameters. The first parameter is objectivist, and it proposes assessing the quality of higher education in two areas: the faculty, their education and professionalism, and the corresponding educational outcomes of higher education graduates and their success in learning and employment. Relativism refers to the next parameter, which determines the goals of the educational process. And, finally, the last parameter is the competence of the participants of the educational process, both teachers and students, their motivation, ability to create a search, and desire for self-improvement (Klimova, 2016, p. 34-43).

One of the key indicators of the quality of higher sociological education at the present stage is the formation of academic culture. Therefore, the sociological reflection of higher education for sociologists is extremely relevant for modern sociological science. Academic culture in the system of higher education quality assessment is the object of scientific research of scholars in the field of humanities disciplines (Pak, 2018, p. 323-326).

An important aspect of the analysis of sociological education in Ukraine is its functional component, which can include the following components.

First of all, here belongs the function of social reflection of the structure of society, which depending on the needs can give a schematic answer and detailed (Pak, 2018, 323-326).

Next, the function of mapping the configuration of social needs of different groups of society. It gives an answer, which social statuses of individuals are now prestigious or not. In this case, education is a social elevator that can change the position of the individual in the structure of society.

Third, quality sociological education creates the preconditions for the formation of a new social picture of reality.

Fourth, the function of social selection provides an answer as to the changing status of members of society at different levels of education.

Fifth, the function of socialization provides guidelines for the formation of a person's personal properties through the prism of social values.

The latter can become a reality through consistent steps of education, as well as the situational formation of values in people through learning and the accumulation of new information (Koniuchenko, 2019).

And sixth, to the communicative function can be attributed such a function of sociological education, which increases the quality of interaction in the educational process and depends on the level of culture of the teacher, his knowledge and methods of impact on the student community and the ability to transfer the cultural achievements of different generations.

Seventh, the humanistic function of the sociological world reveals itself through cultural patterns of behavior, stimulating students' moral growth (Bartosh, 2022).

5. Discussion

However, the variability of the functional components of the educational process is not limited to this. The emergence of the phenomenon of social determination, due to the stratification of social roles at different levels of higher education and social groups becomes important.

In addition, an essential guarantee of the effectiveness of the educational process in higher education in the direction of “Sociology” and Euro-integration in the educational sphere is the principle of electivity of academic disciplines. This changes the number of compulsory elective subjects in the course structure. The list of compulsory disciplines is accordingly considerably narrowed to basic subjects only. Such changes, in turn, increase students' loyalty to the study of the program and their responsibility for the effective assimilation of the material since the subjects they chose on their own.

For the principle of electivity to become one of the fundamental prerequisites of the structure of sociological education in Ukraine it is necessary to overcome a number of objective obstacles on this way. First of all, this requires additional funding, in particular, to pay for more hours of teachers who have increased their workload and to compensate the teachers whose workload has been reduced and they have not reached the minimum. Additional funds are also needed for additional classrooms and their equipment. It is also important to establish a transparent and clear system for monitoring and evaluating the knowledge of students. At the same time, it should be noted that in this system the central place belongs to the student himself, who chooses the direction of training, the number of subjects, and the time required to master them both in the classroom and independently.

It is common knowledge that after receiving a bachelor's degree, students who wish to pursue a full higher education enroll in a master's program to obtain a master's degree in sociology. To gain knowledge and not just a diploma, it is important to master the program, become familiar with various scientific approaches, form your own opinion on many problematic aspects of sociology, and be able to conduct scientific discussions independently, analyze and synthesize the information obtained, and be able to process it creatively. So that the graduate could freely use information from different sources, it is recommended to increase the number of hours for studying foreign languages (Hrabovets, Kalashnikova, Chernous, 2020).

Thus, from a global perspective, sociology has every chance to play a key role among the humanities disciplines. This is explained by the fact that “Sociology” is a science of applied nature and substantiates a number of social phenomena, moreover, it is capable of envisaging future dilemmas and forming scientific and practical recommendations for their solution. Consequently, society is now becoming loyal to the science that studies its regularities, predicts its development, and promotes self-improvement.

6. Conclusions

The research conducted within the framework of this scientific article allows us to draw the following conclusions:

1. Sociological education in Ukraine is described by certain trends and directions of development, namely:

– sociological education is currently in the process of transformation and the search for new forms and approaches. New pedagogical methods are being actively introduced and new achievements are being used;
– further development of sociological education requires the training of qualified personnel-teachers who can get a decent academic salary;

7. Suggestions

1. To enable sociological education in Ukraine to compete with foreign education, it is important to raise the prestige of sociological education and the work of a sociologist by increasing government spending in this area
2. To increase students' interest, it is recommended to introduce the principle of elective courses in higher education in the field of sociology. The student himself chooses most of the subjects, except for compulsory ones, and is responsible for the quality of their assimilation. This requires additional funding for educational programs as a whole, classroom hours and extracurricular hours of study material, and compensation for teachers (both those who have an increased workload and those who have a decreased workload).
3. It is necessary to create conditions for opening scientific laboratories for social scientists, which can be a base for training future specialists in social sciences and a component of the educational process.
4. At the legislative level it is necessary to resolve the creation of decent conditions and increase the prestige of sociological education as a condition for the formation of civil society in Ukraine.
5. Also, an important condition for the further development of sociological education is the creation of new jobs as a guarantee of successful employment of trained specialists.
6. To improve the quality of sociological education it is important to form the academic culture of Ukrainian institutions of higher education of sociological direction, as well as non-core educational institutions where sociology is taught.

Academic culture is a certain level of development of higher education, combining scientific and practical skills and sociocultural practices. Academic culture determines the behavior of participants in the educational process, their patterns of behavior, interrelations, and reactions to the external and internal educational environment. It is a criterion of the existing pedagogical relations between the teaching staff and the student community based on values, moral norms, and principles, a guarantee of a significant level of the educational sector in general, and sociological education in particular.

7. It is important to establish international educational ties to provide internships for sociology students and young professionals abroad as a pledge of motivation for professional growth and career advancement.

As a result, let us note that the search for ways to improve sociological education in Ukraine is now a priority task. Solving the latter will contribute to the search for new ways and approaches to improve the general level of education in Ukraine and the levels of sociological knowledge, in particular. High-quality sociological education will create favorable conditions for young people to improve the quality of life in general.

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Educational and scientific potential of the XXI century. Challenges and prospects

Potencial educativo y científico del siglo XXI. Retos y perspectivas

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Abstract

The article deals with the influence of globalization on the educational and scientific processes. The tendencies of education in globalization are determined. The peculiarities of globalization of education are considered. The article investigates the main aspects of the educational and scientific prospects of the XXI century. XXI century - this is the time of transition to a high-tech information society, in which the quality of human potential, the level of education, and culture of the entire population acquires a decisive value for the country's economic and social progress. Integration and globalization of social, economic and cultural processes that are taking place in the world, prospects for the development of the Ukrainian state for the next two decades require a deep update of the education system, leads to its advanced character. The main tendencies in the modernization of education are recognized: democratization of the entire system of training and education; increase in the fundamentality of education; Humanization and humanitarianization of education, use of the latest technologies of training; Integration of various forms and education systems both at the national and world levels.

Keywords: Education. Globalization. Globalization of education. Social integration. Individualization.

Resumen

El artículo considera el impacto de la globalización en el proceso educativo y científico. Se identifican las tendencias en el desarrollo de la educación en el contexto de la globalización. Se consideran las características de la globalización de la educación. En el artículo se investigan los principales aspectos de las perspectivas educativas y científicas del siglo XXI. siglo XXI. - este es el momento de transición hacia una sociedad de la información de alta tecnología, en la que la calidad del potencial humano, el nivel de educación y la cultura de toda la población son cruciales para el progreso económico y social del país. La integración y globalización de los procesos sociales, económicos y culturales que tienen lugar en el mundo, las perspectivas de desarrollo del estado ucraniano para las próximas dos décadas requieren una profunda renovación del sistema educativo, determinan su carácter avanzado. Las principales tendencias en la modernización de la educación son: democratización de todo el sistema de educación y formación; aumentar los fundamentos de la educación; humanización y humanización de la educación, uso de las últimas tecnologías de aprendizaje; integración de diversas formas y sistemas de educación tanto a nivel nacional como mundial.

Palabras clave: Educación. globalización. Globalización de la educación. Integración social. Individualización.

1. Introduction

The XXI century is a period of development of a globalized society, filled with rapid change. Globalization has affected all spheres of society and acts as a catalyst for

educational reforms, in particular the transformation of higher education. The development of information technologies gradually creates a unified educational space, and the global market of educational services is growing. This requires rapid adaptation of national systems of higher education, coordination, and strategic focus on integration in the international educational space.

The globalization of education is a collective concept covering the processes, phenomena, trends, and regularities of education at the global level. This is an objective irreversible process, which is the result of the socio-economic, political, and cultural convergence of countries and nations. Globalization of education shapes the worldview, morals, and values of students. Globalization is an objective process of integration of educational systems, promoting interpenetration of cultures, exchange of information and experience, scientific and academic mobility, and leading to the possibility of using and assimilating a variety of pedagogical concepts and methods (Gomes & Tavares, 2020; Dzvinchuk & Ozminska, 2020). Innovative and technological advances are constantly changing how we communicate, they work and exist together, and the educational systems that reflect these dynamics are changing, they are most capable of responding to the current and variable needs of youth, society, and the labor market.

At the current stage of society's development, new requirements and guidelines are being formed in the education system. Post-industrialization and global informatization have led to a change in the values of society and a change in the educational paradigm from the acquisition of knowledge, skills and standard skills to development and self-development. Reforming education of the XXI century. radically changes the content and structure of education. Radical restructuring of the existing education system is urgent because it no longer meets modern requirements and cannot provide timely training of people to solve new global problems.

Qualitatively new challenges facing society and the modern education system require its serious institutional modernization, changes in content and strategic target orientation.

Education of the XXI century. should offer such ways of responding to such challenges that would take into account all the diversity of worldview approaches and alternative systems of knowledge, as well as use new opportunities in the field of science and technology, including achievements in the field of neuroscience and digital technologies. Rethinking the purpose of education and the organization of training acquires special relevance in this context.

Before the education of the XXI century. new tasks arise that require a revision of the content of education, forms, methods and techniques of education. One of the challenges of education in the XXI century is the COVID-19 pandemic, which has led to the fact that educational institutions around the world are forced to urgently study and start using available technological tools to create content for distance learning in all fields.

2. Literature review

The theoretical substantiation of the educational-scientific potential of the XXI century is reflected in the works of scientists Knack (2017), Costa (2019), Fontinelli et al. (2020), Marín (2014). It should be noted that recent studies devoted to the study of distance learning prospects have appeared. Namely, the structure of current research areas of distance vocational education problems; the process of education reform in the context of transition to innovative information technologies; trends of distance education development in the context of global education (Rahmilevitz et al., 2019). Education of the XXI century is characterized as a transition to individual and consultative education, which involves the development of individual training programs using interactive technologies, which involves the development of innovative activities in educational institutions (Culp, 2020).

Dzvinchuk D. and Ozminska I. in a scientific article «Educational trends of the XXI Century» highlights the key challenges of education in the XXI century, concluding that the educational demands of society are based on the individualization and continuity of education, the qualitative improvement of the technology and efficiency of the work of educational institutions in the world (Dzvinchuk & Ozminska, 2020).

In their scientific articles, the researchers Costa A. (Costa,2019), Mendes V. A. (Mendes & Souza, 2020), Fontinelli N. (Fontinelli et al, 2020) came to the conclusion that the global trends in the field of education of the XXI century include continuous access to Internet resources, the growth of distance learning, and the transfer of education to virtual space. Due to the change in the educational paradigm of the XXI century, there is a shortage of specialists with technical, managerial, economic competences, as well as competences related to the possession of information technologies.

Savenko O. in his scientific article «The influence of globalization processes on the development of the adult education system» considers the impact of globalization processes on the development of the adult education system, notes that the educational challenges of modern society require the development of creative potential, creative abilities of a person as a condition for a successful professional career. Universal management skills are of great importance - the ability to work within the framework of a project approach, create a team, be a leader, search and analyze information, which will allow an adult to be much more mobile in the labor market, to move from one area to another (Savenko, 2021).

3. Material and methods

The following methods and approaches were used to achieve the goal of the study:

Theoretical methods:

- Analysis of scientific literature on the subject, which clarified the features of education XXI century, as well as the study of psychological and pedagogical and scientific-methodological works on the problem of research, the regulatory framework in the field of education;
- Generalization and systematization of scientific ideas of domestic and foreign scientists, which allowed to formulate the paradigm of the XXI century;
- Modeling - a new conceptual model was built, which served as the basis for the design of the educational process in educational institutions in the meta-disciplinary direction;

Special importance for the disclosure of the topic is the application of the analytical method, which is used to determine the conceptual foundations of the challenges of education XXI century. The theoretical basis of the work is based on the approaches that focus on the change of educational paradigm, analyzing the prospects and challenges of education of the XXI century.

4. Results and Discussion

Education of the twenty-first century is intended to be “education for all” and accessible regardless of social status and age. The consequence of the further advancement of our civilization has been that people without education are increasingly pushed beyond the conditions of a life worthy of human dignity. Other excessive restrictions on the right to education lead to a deterioration of intellectual and cultural unity that is incompatible with balanced development (Araújo, 2021).

Characteristic features of education in the XXI century:

- The moral dominant of education in the XXI century must be the sensory core of education. It is not only about the need to educate a new generation in a spirit of peace, understanding, and tolerance. No less important imperative in the XXI century. is environmental education, and even more broadly, the formation of global ethics of every person and global responsibility as principles of a new humanism for a new unified and holistic world.
- Education in the XXI century is creative and innovative. In a world where variability is based on the characteristics of civilizational development and technological progress, the masses of educational institutions need to pay attention to the problems of the new generation (Alfredo, 2019).
- Education of the XXI century is based on science-based knowledge, it can form a future personality with knowledge, capable of theoretical and critical thinking. Education, where science is subordinated to ideology, manipulative pedagogical technology, and narrow pragmatism seriously, threatens to deform the individual into an irresponsible person with no critical thinking.
- Education is characterized by diversity, adequate to the cultural and ethical level of humanity, satisfying comprehensive social needs - professional and confessional groups, as well as individual spiritual needs (Savenko, 2021).

At the present stage of society's development, the latest requirements and guidelines are being formed in the education system. Post-industrialization and global informatization have led to a change in the values of society and a change in the educational paradigm from the acquisition of knowledge, skills, and standard skills to development and self-development.

The Challenges of Modernity in Education in the XXI Century:

- The era of high-speed communication, the unification of the world economy, increased competition;
- Population aging, an increasing number of low-skilled workers;
- Changing methods of work, merging large and small joint ventures;
- Discovering the brain's amazing potential;
- Growth of educational services;
- A new boom in self-education, a triumph of personality

A feature challenge for the education of the XXI century is the change of educational programs, adaptation for Generation Z. The education of the XXI century is facing new challenges that require the revision of the content of education, forms, methods, and techniques of learning.

Generation Z is characterized by insularity and the inability to express one's own thoughts. Therefore, there is a change in educational programs and the transition to interactive learning technologies, which, in turn, has become a challenge for educators. But the introduction of interactive learning technologies is not a fast enough process, because educators do not have the appropriate skills. The transition to interactive learning technologies involves advanced training in interactive technology for employees of educational institutions.

One of the challenges of XXI century education is the COVID-19 pandemic, which has forced educational institutions around the world to urgently explore and begin using available technological tools to create content for distance learning for students in all fields.

The negative impact of the COVID-19 pandemic on XXI century education:

- Outdated material base;
- Unpreparedness for the transition to distance learning, lack of technical support;
- Unpreparedness of educational staff to use information technology;
- Lack of live communication between students, which is very important for Generation Z and Alpha;
- Constant stay on the computer, which leads to a deterioration of psychological and emotional state;
- Loss of authority of the teacher/professor for students/students;

- Lack of independent task completion by students due to free access to the Internet.

But, in turn, the COVID-19 pandemic is also having a positive impact on XXI century education. Educators around the world are getting new opportunities, learning how to do things differently and with more flexibility, the result of which is a potential advantage in access to education for students. The COVID-19 pandemic has provided teachers around the world with new experiences and new opportunities to develop their own potential.

Positive effects of the COVID-19 pandemic on education:

- The use of interactive learning technologies;
- Accessibility to information;
- Ability to organize the educational process;
- The desire for self-education.

And, most importantly, for Generation Z, Alpha and future generations this experience of isolation and distant learning apart from their peers, teachers will be a careful reminder of the importance of our human need for direct communication in real life. Nowadays society needs not only highly qualified specialists in the field of education, culture but also people with high responsibility, initiative, able to express their point of view, to argue it, to find optimal solutions to various problems, with the skills of tolerance communication.

Prospects for XXI century education:

- Access for everyone to lifelong learning for the continuous formation of competencies that meet the demands of a globalized knowledge society;
- Ensuring sustainable economic development through improved employment and entrepreneurship;
- Strengthening social inclusion and cohesion through active involvement in social activities;
- Individualization of higher education;
  The use of interactive technologies of learning;
  Distance learning.

The impact of XXI century educational development on students:

- the ability to plan the final result of the work and present it in verbal form and, as a consequence, the ability to defend their own project in a public defense;
- the ability to plan actions (manage time, budget, own resources);
- the ability to think critically and make adjustments to earlier decisions;
- the ability to constructively discuss results and accept criticism;
- the ability to evaluate the projects or tasks of others.

Education of the XXI century is characterized as “lifelong learning”. Such education activates the productive activity of a person at any age, provides him with a reserve of vitality, contributes to a better arrangement in life, the achievement of material, social and spiritual well-being. Such education is the key to a new life, helps to solve life and professional problems, improve personal, family, professional, public life.

A major trend in modern education is the transition to individualized education, which includes the development of individualized curricula, taking into account the needs and special interests of students.

Individual education involves working with small groups (3 to 6 people), as well as the following forms of education as training, tutoring classes, tutoring classes, internships under the guidance of a teacher-mentor role-playing.

The use of such forms in the educational process of higher education allows to prepare a specialist for a particular professional activity, the mastery of practical skills, finding solutions in problem situations (Savenko, 2021).

One of the prospects of education in the XXI century is the use of interactive technology. The introduction of interactive forms of learning is one of the most important directions of improving the training of students. Interactive learning is a special form of organizing cognitive activity. It implies quite concrete and predictable goals. One of such goals is to create a comfortable learning environment in which the student feels his success, his intellectual ability, which makes the learning process productive.

The use of the interactive model includes simulation of life situations, role-play and problem-solving, taking an individual approach. The learning process is based on the application of theoretical knowledge in practice, namely, simulation of life situations.

The educational process based on the use of interactive teaching methods is organized with the inclusion of all students without exception in the learning process. Joint activity means that everyone makes a special personal contribution and there is an exchange of knowledge, ideas, and methods of activity in the course of the work. Individual, pair, and group work are organized, project work, role-playing games, work with documents, and information sources are used. Interactive methods are based on the principles of interaction, student activity, reliance on group experience, obligatory feedback.

Creating an environment of educational communication, characterized by openness, the interaction of participants, the equality of their arguments, the accumulation of common knowledge, with the possibility of mutual evaluation and control.

Thus, under conditions of educational communication, there is an increase in accuracy of perception, the effectiveness of memory increases, more intensively developed intellectual and emotional properties of personality as stability of attention, the ability to

distribute it, the observation of perception, the ability to analyze the activities of a partner, to see his motives, purpose.

Also characteristic of the prospects of education in the XXI century is distance learning, which is associated with access to education and the introduction of interactive teaching methods (Mendes & Souza, 2020). Distance learning performs the function of mobile exchange of educational resources, stimulates the export and import of education, uniting the creative, intellectual, informational, and scientific potential of the world. At the beginning of the XXI century, virtual (electronic) universities are in great demand.

With the use of Internet technologies, it became possible to obtain educational information from any library using a computer. Learning has become interactive, the level of independent work has increased, and the intensity of the learning process has increased. These advantages have intensified the work of the teams of many educational institutions to introduce information technology into the traditional model of the educational process, covering the necessary organizational, technical, human, and technological prerequisites (Carmo & Carmo, 2020). With distance learning, students can overcome psychological barriers associated with communication skills through teamwork and public speaking. Distance learning increases a student's potential, creativity, self-organization, ability to independently master information technology and make responsible decisions.

Indeed, the quality of distance education is not inferior to the ideal quality of the full-time form of education, but it requires the teacher to better coordinate the learning process, to constantly improve their courses, to increase their creativity and qualifications by innovations, to use in the learning process constantly updated educational and methodical publications.

The number of interactions between students increases, and the teacher acts as an equal partner. Counseling in distance learning is one of the forms of managing students' work and providing them with assistance in independent study of the discipline. In distance learning justified itself test control, because the tests are well suited for self-monitoring and are very useful for individual studies. Distance learning plays a particularly important role in helping to prepare high school graduates for independent testing (Monteiro de Barros, 2015). The result, obtained through months of observation, was a conclusion that allows us to clearly identify the pros and cons of the proposed system of education (Charczuk & Aragón, 2014). Entering the fourth industrial revolution, marked by the knowledge economy, involves the rise of scientific activity at the highest levels of the educational space. Universities and science are symbioses that guarantees the development of all spheres of life in any society. Undoubtedly, the demand for highly qualified scientific and pedagogical personnel and talented researchers and students engaged in research, inventive activity has always been great.

5. Conclusion

Changes in socio-economic conditions in modern society have significantly increased the requirements for the level and quality of education in the XXI century, which is characterized by focusing on the personality of the student, the processes of his development and formation.

Prospects for XXI education: access for every person to lifelong learning for the continuous formation of competencies that meet the requirements of a globalized knowledge society; ensuring sustainable economic development through better employment and entrepreneurship; strengthening social integration and cohesion through active involvement in social activities; individualization of higher education; use of interactive learning technologies; distance learning.

The priority tasks of XXI century education in today's conditions are the formation of a culture of social and ecological thinking, understanding the problems of global interdependence, formation of new values and ideas about true citizenship in an increasingly globally interdependent and complex world.

Effective development of education is possible only on the condition of modernization of all components of pedagogical systems, including information and educational environments of educational institutions, based on the implementation of human-centered paradigms and equal access to quality education. Among the important directions of development and improvement of the education system, the problems of informatization of the educational process are of particular importance, which allows expanding and deepening the theoretical knowledge base and creating effective computer-oriented methodological systems of education.

The educational process is based on individual work. This is one of the main ways to improve education, improve the quality of training because it teaches to replenish knowledge, to navigate the flow of scientific information. The main methodological innovations are related to the use of interactive teaching methods.

Before the education of the XXI century, there are the latest challenges that require the revision of the content of education, forms, methods, and techniques of learning. One of the challenges of education in the XXI century is the COVID-19 pandemic, which has led to the fact that educational institutions around the world are forced to urgently study and begin to use the available technological tools to create content for distance learning in all fields.

For modern education of the XXI century, educational programs that are economically centric and narrowly technical in nature are unacceptable. Its sociocultural, worldview function requires active, conscious, responsible educational and cognitive activity that would stimulate intelligence, citizenship, and a high culture of moral self-awareness of the individual.

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Innovation to optimize the teaching and development of modern education in the field of culture and art: vectors of development

Innovación para optimizar la enseñanza y el desarrollo de la educación moderna en el ámbito de la cultura y el arte: vectores de desarrollo

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Abstract

The essence of optimization is the creation of the most favorable conditions for obtaining the desired results without excessive use of time and reduction of physical activity. This aspect is an important component of training specialists in the field of culture and arts, as it allows to increase the efficiency of the educational process and reduce resources to achieve this result. It should be noted that the relevance of the proposed topic is undeniable - the search for optimal solutions to reform the educational process has been going on for more than a decade. Accordingly, the article aims to analyze innovative approaches to optimizing the teaching and development of modern cultural education. Both general theoretical methods and special art studies were used in the preparation of the work. In particular, the analytical method was used to determine the current state of teaching cultural and art disciplines, to characterize the content of curricula and programs. Among other methods we have used, we define synthesis, analysis, induction and deduction. Based on the research, it was found that in addition to traditional teaching methods, special ones should also be used, in particular, more attention should be paid to distance learning methods.

Key words: optimization, innovative approaches, teaching, culture and art.

Resumen

La esencia de la optimización es la creación de las condiciones más favorables para obtener los resultados deseados sin un uso excesivo del tiempo y la reducción de la actividad física. Este aspecto es un componente importante de la formación de especialistas en el ámbito de la cultura y las artes, ya que permite aumentar la eficacia del proceso educativo y reducir los recursos para lograr este resultado. Cabe señalar que la relevancia del tema propuesto es innegable: la búsqueda de soluciones óptimas para reformar el proceso educativo se lleva a cabo desde hace más de una década. En consecuencia, el objetivo del artículo es analizar los enfoques innovadores para optimizar la enseñanza y el desarrollo de la educación cultural moderna. En la elaboración del trabajo se han utilizado tanto métodos teóricos generales como estudios artísticos especiales. En particular, se utilizó el método analítico para determinar el estado actual de la enseñanza de las disciplinas culturales y artísticas, para caracterizar el contenido de los planes de estudio y los programas. Entre otros métodos que hemos utilizado, definimos la síntesis, el análisis, la inducción y la deducción. Sobre la base de la investigación, se constató que, además de los métodos tradicionales de enseñanza, también deberían utilizarse otros especiales, en particular, debería prestarse más atención a los métodos de aprendizaje a distancia. El trabajo con plataformas en línea con un control adecuado demuestra un alto índice de éxito. Si se siguen investigando los métodos de optimización, se mejorará el proceso de enseñanza en la práctica.

Palabras clave: optimización, enfoques innovadores, enseñanza, cultura y arte.

1. Introduction

The modern educational process in the field of culture and art implies the involvement of the latest teaching methods aimed not only at the assimilation of new material by students, but also at the development of practical skills. At the same time, an important problem is an optimization of the educational process, which does not harm teaching (i.e., does not occur by radically reducing theoretical courses), but with the use of digital technologies and pedagogical techniques that require detailed study. For a long time, European and American universities have practiced varieties of optimization, through which students are able to gain additional knowledge and skills during their studies, although the search for optimal solutions to reform the educational process has been going on for decades. At the same time, such schemes are beginning to be used for Central and Eastern Europe, thanks to which both positive and negative elements and risks can be taken into account. Accordingly, an important task remains the analysis of the experience of using digital Internet technologies in the process of training cultural professionals.

The importance of optimization is to create a more favorable environment for getting results without time and without significant additional burdens. This aspect is an important component of the training of specialists in the field of culture and arts, as it allows reducing the cost of resources to achieve the result. Hence, the article aims to analyze the innovative approaches to the optimization of teaching and development of modern cultural education.

2. Literature review

The theoretical part of the study is formed based onthe modern cultural and pedagogical research of contemporary authors. Ukrainian researchers pay much attention to the analysis of transformations in the national education system. For example, Serdyukov (2017) analyzed the key innovations of the modern educational process. The author focused on the coverage of education in the United States of America, his analytical note also discusses ways to increase the rate of innovation transformation in the educational system.

Rutkovska (2021) outlined the main points of discussion on the prospects for incorporating innovative cultural approaches in the teaching of modern humanities branches. She believes that culture is an important means of building a democratic society, a kind of tool influencing the unity of its individual elements.

Zelenska (2021) investigated the basic principles of introducing culturological education in higher education institutions.

At the same time, the methodological basis of the article is dumped by the works of modern foreign pedagogues and cultural scientists. For example, Hussin (2020)

described in detail the main transformational challenges in the field of culture and art. Andersone, 2020, explored the main innovative principles of modern education that improve teaching processes in Latvian universities. This researcher believes that the improvement of content and approaches of training programs takes place to develop the diverse competence of students in areas important for human activities. At the same time, Caiado et al., (2021) characterized the fundamental techniques of modern innovative teaching used to optimize the educational process. Zhang (2021) characterized the main processes of innovation and optimization of art teaching based on the analysis of the Internet plus technologies. In this paper, he explored the main advantages and difficulties of the new method of teaching art through the lens of the properties of the Internet Plus platform. In addition, he investigated the use of this technology through the current moody network, APP, WeChat, and other modes of learning.

Pérez et al. (2018) analyzed the specifics of optimizing arts learning through video games. They believe that during game-based classes, students are primarily focused on the purpose of the game and have the enthusiasm and desire to explore a particular cultural phenomenon. At the same time, experts explain that, on the other hand, students have a passive attitude when they fulfill the role of just recipients of knowledge, often they are bored when they are in traditional art classes. Consequently, to involve students more in the educational process, and in-depth achievement of educational goals, the importance of games of educational purpose, formed on new technologies, has increased markedly. Thus, the problem under study has received some response in the professional literature, however, it is covered partially, primarily based on a general analysis of innovative teaching methods. Consequently, the analysis of innovative approaches to the optimization of teaching in the field of culture and art has not yet received much attention in analytical studies.

3. Materials and methods

Both general theoretical methods and special art history methods were used in the work. To achieve the goal of the research, such methods were applied as analytical - to find out the current state of teaching cultural and art history disciplines, to characterize the content of curricula and programs on these sciences, theoretical - to summarize the initial provisions, which determined the methodological basis of the work, and in summarizing its conclusions. In general, the study is built on the principles of objectivity, scientific and systematic. Of the general theoretical methods of research, we will distinguish - synthesis, analysis, induction, and deduction.

Also, the article is formed based on the application of the method of abstraction, which provides a transition from generalized theories to the formation of specific conclusions. Some attention is also paid to empirical methods of collection and interpretation. In particular, the robot is constructed based on a critical analysis of curricula. At the same time, the presentation of the material is built based on the application of chronological and retrospective principles. At the same time, the problem of further implementation of innovative approaches to optimize the development of modern education in the field of

culture and art is covered by the predictive method. The study also used the statistical method, which is based on a qualitative analysis of experimental data.

4. Results

The term “optimization” from Latin translates as “the most favorable or the best of the possible”. Optimization refers to the teacher's systematic approach to the organization of the educational process based on the regularities and fundamental principles of learning, as well as a scientifically argued choice of the best variant of the theory of this process.

Thus, optimization of learning activities includes:

1. Formation of goals and objectives for each lecture, seminar (or other forms of training).
2. Conformity of the teaching content with the goals and tasks
3. Selection of a rational combination of forms of students' educational activities
4. Implementation of curricula based on the plan
5. Analysis of the results and evaluation of the optimality of curricula

Teachers in the field of culture and art can consciously optimize their professional activities by choosing the most necessary and successful way to perform pedagogical work (Zhang, 2021). Thus, the optimization of scientific and educational processes in higher education institutions can take place by taking into account specific initial principles: the improvement of pedagogical activity of a teacher of fine arts and cultural disciplines by optimizing the organizational and methodological support of professional work and development of his/her own creative traits; wide actualization of emotional, ethical, aesthetic, intellectual and creative perspectives of a culture and art teacher directly in the educational and scientific processes, etc.

Today's experts prove that teachers, as a result of optimizing their professional work, can obtain degrees such as:

1. elementary (the teacher is characterized only by some features of professional activity).
2. basic (when a teacher knows the basics of pedagogical work);
3. perfect (the teacher is characterized by a clear direction of the educational process and quality of pedagogical actions);
4. creative (at this stage the teacher fully owns initiative and creative approaches to the implementation of educational activity) (Zelenska, 2021).

In particular, one of the varieties of optimization in contemporary art education is the formation of integrative courses, integrative modules, which not only allow mastering the educational material but also promote personal development. Such disciplines aim to generalize and systematize philosophical-aesthetic, psycho-pedagogical, and art history knowledge to reveal the spiritual potential of art and work with modern scientific literature.

This is partly realized by involving additional philosophical disciplines (in particular, logic and anthropology, but also history and sociology).

For example, in the United States, social studies and humanities courses in cultural studies are usually allocated approximately the same amount of class time - about 22-27%, taking into account the specifics of the institution and its specialization.

Typically, this group of subjects includes history, economics, philosophy (particularly logic and anthropology), and a foreign language. At the same time, U.S. curricula have a unique feature that is not typical or not well represented in European educational institutions (Mesquita et al., 2021). These include the active involvement of communication disciplines related to public speaking style, small group discussions, and the primary goal of which is to enhance critical analysis. At the same time, an optimization component of the training of specialists in culture and art is the emphasis on American achievements in this field. European and Asian art histories are indisputably presented, but in general, the emphasis is on Americanist studios. Such an approach is justified because it is the American labor market that will be the potential employers of future professionals. For this reason, the main focus of their training is the study of local traditions only with the additional knowledge of other artistic practices, mostly necessary for a comparative context. There is markedly high attention to the history of the United States itself and neglect of knowledge of events in the world. it should be noted that this phenomenon is in principle characteristic of American humanities: the study of history is also American-centered, so that, for example, the history of World War II covers the expanse of the Pacific, where the main American troops acted, while the war in Europe is of secondary importance.

Consequently, the increase in the number of structural modifications of training specialists in the field of culture and arts is ensured through the spread of modular curricula and the use of cyclic structures of curricula. The principle of cyclicality is, among other things, also the distribution of training courses into quite large separate periods during which students acquire knowledge, form skills, and abilities in the subject. Individualization and differentiation are evident in the continuous training process by allowing students to determine the sequence of modules and courses themselves, which is due to multifaceted curricula (Mesquita et al., 2021). This technique allows for the adjustment of the individual learning trajectory, adapting it as flexibly as possible to the needs of the students.

The European best practices are also important in terms of optimizing education and training. For the most part, continental European states have unified curricula for academic disciplines. At the same time, France has introduced a modular system of education. Thanks to this optimization, students of different specialties (including also future specialists in culture and arts) annually receive certain official documents that enable them to enter the labor market without completing a full course of study and obtaining a bachelor’s or master's degree. This is achieved by the particularities of the formation of curricula in universities or specialized art schools and other institutions - teachers create them based on clear blocks of disciplines. This makes it possible for

students to obtain intermediate qualification certificates after several years of study. These modules (or the overwhelming majority of them) in French institutions of higher education are constructed in such a way that they influence professional and specialized training of the future specialist in cultural studies but form it based on integration with other disciplines of the socio-humanitarian cycle (Andersone, 2020). We consider this experience of optimizing the educational system to be useful because such a system of training organization allows a flexible response to the needs of the labor market, as well as encourages young people to find a job that corresponds to their interests. This makes it possible to meet the need for workers with appropriate qualifications.

The richness of training programs is also manifested in their content, and not only in their structural construction. In particular, the importance of such an element as pedagogical practice can vary depending on the cultural discipline from 0 to 50% of the total teaching time (Serdyukov, 2017). Note that the control over the implementation of training is carried out taking into account the traditions of its organization. For example, in Germany universities have a certain autonomy, while in England project management is carried out under the control of state national services (in particular, the Agency for Teacher Education), and in France, such functions are performed directly due to direct instructions from the government or the Minister of National Education. Accordingly, fine-tuned and stable work on curricula and timely monitoring of tasks can significantly optimize the educational system.

In order to optimize learning in China, there is a special network plane called “Internet Plus”. It is a national strategy that is deeply involved in various spheres of life. In addition, “Internet Plus” has its own specific uses in teaching art in colleges or universities, and this new mode of art education is constantly being optimized and improved. In China, teaching art and culture based on the “Internet Plus” platform can also take place through the modern network of moody, other mobile applications, WeChat, and other modes. Zhang (2021) conducted an anonymous survey among Chinese university students on the new platform of teaching art in colleges and universities. The questionnaire talked about the features of teaching and learning, their disadvantages, and their advantages. The results showed that the average attendance of Massive Open Online Courses (MOOCs) at art universities is 81%. This indicates that the majority of students are interested in this paradigm of learning and motivated to learn using the resources of the World Wide Web. At the same time, according to the attitudes of Chinese university students toward the innovative mode of learning, almost 70% of students sympathize with the mixture of online and offline learning (Zhang, 2021). This fact supports the view of the popularity of innovative learning optimization methods, including based on the prevalence of the Internet Plus platform among Chinese students.

In the e-learning environment, most European universities have developed their own E-learning platforms on which learning takes place. Thus, European institutions offer specific learning solutions for their online visitors. These e-learning environments offer learning opportunities on different topics and for different target groups. Visitors to these

platforms are exposed to didactically prepared multimedia content. Their content offers visitors future learning pathways. In addition, e-learning on E-learning platforms often focuses on continuous learning processes and extended visits (Queiroz-Neto et al., 2021). This is done so that students are better able to work through a topic. This in turn allows users to actively participate, interact, and creatively collaborate with other users. Several European universities integrate their E-learning into a special web2.0 global service, which allows students to actively communicate with each other and even create new content. To optimize learning in the field of culture and art, a number of educational games and quizzes can be found on the web pages of European museums (Pérez et al., 2018).

Effective use of Internet resources is indeed impossible without the parallel creation and promotion of a course in protective media literacy. We are talking about a special directed curriculum for culturologists, which will minimize the damage threatening students from aggressive propaganda machines (in today's world, we are talking primarily about Russia and the active dissemination of its rails and anti-cultural messages). Such courses make it possible to avoid propaganda traps and to verify the information received.

This approach affects the integration of art and cultural heritage education and new game technologies through which students and ordinary visitors to the sites can explore artistic heritage. The games are structured in a variety of ways, from simple activities such as collecting a museum artifact to creating medieval music. This encourages users not only to memorize information but also affects the formation of skills to find new and creative ways in the field of art and culture.

5. Discussion

Currently, the training of specialists in the field of culture and art is focused on the formation, development, and correction of the fundamental knowledge acquired by students, as well as the improvement of practical skills and abilities. Based on this, there is a gradual change in the paradigms of teaching this specialty both in Ukraine and in Europe and America. In particular, the first signs of this were gradual changes in the standards of culturological education, justified by the transition to the Bologna system of evaluation and training, which in recent decades has become established in many leading European countries.

At the same time, the rapid development of technology, the globalization challenges of our time, the COVID-19 pandemic, and other factors have led to changes both in society itself and, among others, in the education system. Note that they manifested themselves differently in different disciplines (and, accordingly, training), but the understanding and the need to optimize education are quite relevant to modern systems of training specialists.

The effectiveness of theoretical and practical training of future specialists in cultural studies directly depends on the teachers' ability to interest and activate students, awaken

their desire and develop the ability to work creatively and effectively (Serdyukov, 2017). Accordingly, in our opinion, a special combination of teaching methodology with practice is required, which together can significantly develop the cognitive capabilities of students. Note that this does not mean a complete rejection of traditional problem-seeking, analytical or illustrative methods of teaching, but only about their combination with new forms of the learning organization.

In particular, throughout the practice of distance learning has proven effective platform Moodle, through which you can create additional opportunities to use in the educational process of the distance learning system. Thanks to such blended learning, it is possible to freely distribute software products and freely apply and modify the product or its individual elements. The use of LMS Moodle in the training of future specialists in cultural studies allows to familiarize students with the educational content and simultaneously provides an opportunity to form an individual learning trajectory of disciplines. Also, thanks to this technology it is possible to keep the feedback - dialogic communications in the direction of “student-content”, “student-teacher”, “student-student”, the possibility of control measurement of knowledge, etc.

Turning to the results of using LMS Moodle, we note the positive aspects of this optimization of the learning process: the formation and improvement of electronic courses; growth of motivation for learning (which is especially noticeable during distance or blended learning); improvement of teaching skills using Internet tools. At the same time, problems are also noticeable: difficulties in cooperation, inefficient use of time, and lack of student self-discipline. The proposed remarks are also quite true for other online learning systems. Accordingly, personal experiences with such platforms should be taken into account to qualitatively optimize learning and determine their suitability for teaching cultural studies courses. Obviously, working with the continued use of such platforms will require a combination of personal experience and faculty expertise - this could be the key to the success of a blended learning system in the future.

We believe that the disciplines of the media-educational cycle related to the consideration and analysis of direct human contact with a variety of technical devices are relevant in today's learning environment. Already now the model of communication between a person and a computer or other device has been greatly simplified: keyboard controls have been rather quickly replaced by tactile controls, i.e., the need to use text or any other auxiliary commands has disappeared (Andersone, 2020). Probably the next more important improvements can be expected in the coming years - in particular, the gradual use of audio control, which will have the character of a dialogue between operators (users) and powerful computers with high performance, a considerable amount of RAM (needed to provide and maintain) interaction with a person, such as decoding his voice, etc.) and much larger sizes of permanent memory.

Education in the field of culture and art today is impossible without increasing the practical part of students' training. One of the ways to optimize the education and training of future

specialists is, therefore, to focus on the formation of skills and abilities, not only on the mastery of theoretical knowledge. This can be achieved by increasing the number of relevant classes and reducing the role of lecture courses. For Ukraine, this European experience is quite relevant, because the domination of the theoretical part in the methodology of teaching in our institutions of higher education is still quite significant.

Also, the pedagogical process should be optimized based onhumanitarianization, i.e., awareness of the importance of the humanistic component in the training system. In particular, a humanistic style of contact at the teacher-student level, the involvement of participants in the educational process in cultural negotiations fit into the process of cultural identification. Thanks to this it is possible to achieve that the future specialist in culture and art will be able to better interact with other people (including non-specialists), which in modern conditions can only be greeted. The ability to explain complex things in an accessible way is an important “virtue” of modern professionals, so you should not get carried away in the training processes with modern computerized disciplines alone.

6. Conclusions

The analyzed experience of the European, American, and Chinese systems of training specialists in the field of cultural studies testify to a considerable updating of the content of academic disciplines, formed taking into account the modern achievements of science and technology. In particular, specialists pay much attention to the integration of elements of Internet education into the educational process. This combination makes it possible to optimize the individual elements of learning, to interest students in the work, as well as quickly and correctly determine the results of learning. The use of modern digital platforms also contributes to the implementation of the latest teaching methods, in particular with the use of digital educational tools. Special attention, we believe, deserves the introduction in some European countries (first of all, in France) of the modular system of cultural studies training. Thanks to this, an important effect of cooperation with employers is achieved: after several years of training, students are able to start working. The aim of receiving education is not only to obtain the necessary knowledge and skills but also to be able to put them into practice and get a job. Such a modular system makes it possible to optimize and speed up this process considerably, to respond in time to the offers of the stakeholders.

On the other hand, the U.S. experience points to the importance of focused training, that is, the introduction of new disciplines aimed at improving personal qualities combined with a focus on the potential job market. The main focus of training in culture and the arts is the study of local traditions only with additional knowledge of other artistic practices, mostly necessary for a comparative context.

Online learning platforms also contribute to optimization. We believe that the positive aspects of this process should be considered an effective combination of traditional and innovative teaching methods, formation and improvement of e-disciplines; further introduction of technologies and means of distance learning (which in the context of the

COVID-19 pandemic has gained additional relevance - the trend to improve blended learning will also continue in the future) increase in motivation to learn, mastery of modern technologies and techniques (e.g. the use of game technologies) and However, the problems associated with such extensive use of computerized systems may become tangible: difficulty in cooperation, inefficient use of time, lack of self-discipline, etc. Accordingly, personal experience with online platforms should be considered to optimize learning qualitatively. We believe that the capabilities of Moodle are underestimated in the teaching environment. The platform has shown itself well as a means of optimizing the training of cultural studies in Ukraine. In particular, thanks to them it is possible to effectively combine the possibilities of traditional teaching with modern methods. Although it is not flawless and its use is also fraught with risks, it enjoys well-deserved popularity in Ukraine and other countries of Central and Eastern Europe. Undoubtedly, the further development of Internet technologies will highlight other, more advanced tools for optimizing the learning process. True, the combination of basic traditional methods of teaching and modern technologies will be the basis for further development of training in the field of culture and art.

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Gamification of education: innovative forms of teaching and education in culture and art

Gamificación de la educación: análisis de formas innovadoras de enseñanza y desarrollo del proceso educativo en el ámbito de la cultura y el arte

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Abstract

The article is devoted to the analysis of the concept of "gamification of education". The study aimed to determine the features of gamification in education and analysis of innovative forms of teaching and development of the educational process in the field of culture and art. Research methods: among the theoretical - analysis, synthesis and

systematization and generalization of scientific and scientific-methodical literature to clarify the state of study of the research problem and specify the concepts on which the process is based; among the empirical - questionnaires of participants in the educational process in order to understand the place of the method of "gamification" in the educational process of higher education institutions. The results of the study highlight the features of the phenomenon of "gamification" and its possibilities in the organization of the educational process during the training of future professionals, in particular in the field of culture and art; there are three types of gamification that are used in education (light, deep and combined); the fundamental components of the method (elements, mechanisms, dynamics, game characters).

Keywords: educational gamification, educational process, game.

Resumen

El artículo está dedicado al análisis del concepto de “gamificación de la educación”. El objetivo del estudio fue determinar las características de la gamificación en la educación y el análisis de las formas innovadoras de la enseñanza y el desarrollo del proceso educativo en el ámbito de la cultura y el arte. Métodos de investigación: entre los teóricos - análisis, síntesis y sistematización y generalización de la literatura científica y científico-metódica para aclarar el estado de estudio del problema de investigación y especificar los conceptos en los que se basa el proceso; entre los empíricos - cuestionarios de los participantes en el proceso educativo con el fin de comprender el lugar del método de “gamificación” en el proceso educativo de las instituciones de educación superior. Los resultados del estudio ponen de manifiesto las características del fenómeno de la “gamificación” y sus posibilidades en la organización del proceso educativo durante la formación de los futuros profesionales, en particular en el ámbito de la cultura y el arte; se distinguen tres tipos de gamificación que se utilizan en la educación (ligera, profunda y combinada); se señalan los componentes fundamentales del método (elementos, mecanismos, dinámica, personajes del juego).

Palabras-clave: gamificación educativa, proceso educativo, juego.

1. Introduction

Modern political, economic, social, and cultural development requires a reorientation of existing realities, particularly in education. Education is a dynamic system, which is greatly influenced by all the changes taking place in society. Changes in the world community lead to the fact that the relevance of the issue of quality education increases significantly, the realities of the modern world require new approaches, the search for new, non-standard, more effective, compared to traditional, methods of organizing the educational process. A modern educator faces the task of selecting and integrating into the educational process such forms, methods, and means of education, which with minimal expenditure of resources can provide the most effective result. To attract students to the active learning process, who spend much of their time in the world of

digital gadgets and technology, is possible only if you create a familiar environment for them. Therefore, the problem of organizing a modern digital learning environment has become quite urgent today (Toda et al., 2019). So, one of the latest technologies for organizing such an environment is the gamification of education, which is understood as a modern method of organizing the educational process, which uses game elements in a non-game context, in training in particular (Seaborn & Fels, 2015).

So, the purpose of the study is to identify the features of gamification in cultural and art education and analysis of innovative forms of teaching and development of the educational process in the field of culture and art, and among the main objectives - highlighting the structure, components, and conditions of implementation of this method and establishing the place of gamification among other methods of organizing educational activities in educational institutions.

2. Literature Review

It is clear that changes in society require changes in education, which leads to new forms and means of learning. One such form of educational process organization is gamification. The definition and introduction of game elements in the educational process are considered one of the innovative forms of building a training session.

Many scientific works have been written on gaming technologies (Fadhli et al., 2020). They define the gamification as a certain process in which two or more parties take part, competing with each other and pursuing a certain goal. The use such a strategy in education will improve the educational goals. It is a kind of activity in which social and cultural relations between people are recreated. Many researchers in this field (Toda et al., 2020) note the mobilization and activation of the possibilities of the individual, the realization of his/her creative potential, since the game has such characteristics as improvisation, competitive spirit, emotional component and pleasure.

The value of gaming technology cannot be exhausted and assessed by entertaining and creative possibilities. Its phenomenon lies in the fact that, being entertainment, relaxation, it is able to grow into learning, creativity, modeling human relations (Ahmad et al., 2020). In modern higher education, which relies on the activation and intensification of the educational process, the use of gamification is highly recommended. A number of works of leading domestic and foreign scientists are devoted to the study of the phenomenon of gamification, analyzing the theoretical foundations of the named method (Landers et al, 2018) note the feasibility of the game in education (Dichev & Dicheva, 2017), (Mekler et al., 2017). (Boudadi & Gutiérrez-Colón, 2020) emphasize the impact of gamification on increasing motivation for learning. This method is designed for teachers, especially middle school and high school who want to integrate digital technologies in the educational process, diversifying teaching-learning-assessment activities, to increase the attractiveness of classes and further motivate / involve students.

(Chan, Nah, Liu & Lu, 2018) describe the elements and experience of the game in terms of the students' ability to arouse motivation and their involvement in work tasks. In this context (Majuri, Koivisto & Hamari, 2018) analyze the educational goals of gamification, as well as the targeted and achieved results by using the immersive video game experience as a learning support.

It should be agreed with a number of experts (Suppan et al., 2020) that the expansion of the use of gamification, including for the purposes of organizational learning, the expansion of the capabilities of technological platforms for the introduction of gamification tools will help blur the boundaries between these concepts. This trend is observed by (Ofosu-Ampong, 2020) in terms of a number of implemented projects.

When considering the essence of gamification, researchers (Legaki & Hamari, 2020) are unanimous in that it is not a process of creating a game, but acts only as a transfer of individual positive elements, mechanisms and characteristics of the game (goal, rules, feedback and freedom of participation) to the non-game sphere.

However, there is no unity regarding the distinguished game elements and mechanisms, their importance in understanding the essence of gamification (Swacha, 2021).

Most often, gamification is defined by scientists (Huang et al., 2020) as the partial inclusion of game elements in the creation of an interactive interaction system without a full-fledged game as the final product.

So, we see that the phenomenon of gamification is analyzed by researchers on different sides: the use of game technology in a non-game context (Landers et al., 2017); the use of game technology in the educational process; a way to motivate and activate activities (Alsawaier, 2018), solving applied problems (Armstrong & Landers, 2017).

3. Methodology

The indicated goals and objectives of the study determine the use of such theoretical methods as: analysis, synthesis, systematization, and generalization of scientific and scientific-methodological literature to clarify the state of research problem and specification of concepts on which this process is based, comparison and prediction; as well as empirical methods - questioning of the participants of the educational process in order to understand the place of the "gamification" method in the educational process of higher education.

The gamification method was introduced on the undergraduate audiovisual arts and production course. For this, game techniques and elements in the classroom were used to bring the learning process closer to the field of interest of applicants. Thys the gamification method was logically divided into structural units, which were gradually introduced into the learning process:

1) the light gamification method 1-2 month of studies;
2) the deep gamification method third month;
3) the combined gamification method during the second semester.

The main components of the gamification method were also considered: elements, mechanisms, dynamics and characters of the proposed games during the year. The intensity of the organization of the game was divided into three levels: easy, medium and hard. This structure of the lesson reinforced the principles of goal setting.

The mentioned aspects are considered in isolation and, in some places, haphazardly. In our opinion, it is necessary to consider gamification as one of the effective interactive methods that can be taken as a basis for organizing an educational session. All this suggests that gamification is not only a “new concept of education”, but also the emergence of a new trend in the educational process. Thus, the scientific novelty of the article lies in a versatile and at the same time complex and holistic consideration of the concept of “gamification of education” with a focus on the application of this method in training future specialists in the field of culture and art.

4. Results and Discussion

It is known that today's youth spend a lot of time playing video games, so we should use game techniques and elements in the classroom to bring the learning process closer to the sphere of interest of education applicants. Since the easiest and most effective way to assimilate knowledge, apply it in practice, and master soft skills is a game.

The goal of gamification of the educational process is to develop vibrant, interesting, and informative learning activities by introducing game elements. It should be remembered that in a learning game the obligatory element is the educational content.

Modern researchers have identified 3 types of gamification that have applications in education: light, deep, and combined (Karmanova & Shelemetyeva, 2020). The characteristics of each type are presented in Fig. 1.

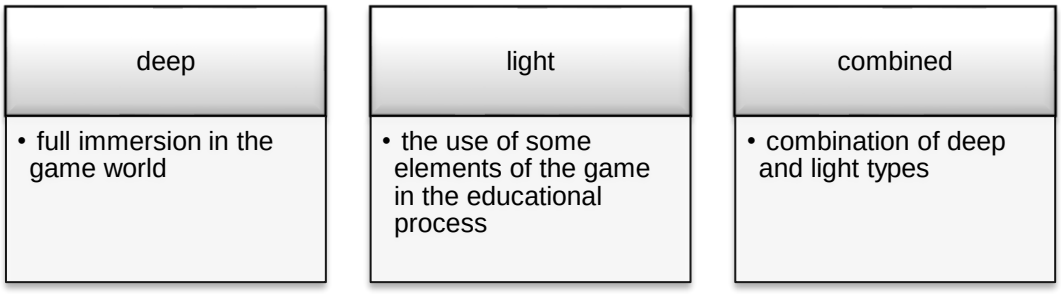

Fig. 1. Characteristics of gamification types, Source: author's development.

The use of the gamification method in the educational process should be based on a prepared algorithm and a combination of certain factors. The components of the gamification method are shown in Fig.2.

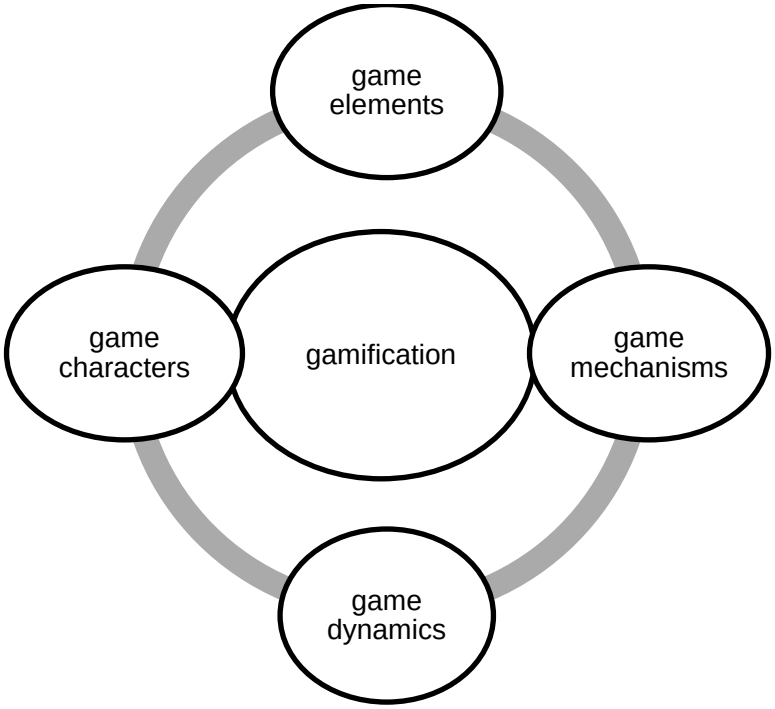

Fig. 2. The components of the gamification method.
Source: author's development.

So, the basic components of the method can be considered: the elements, mechanisms, dynamics, and characters of the game (Willig et al., 2021).

Elements refer to all the components of the game's organization - tasks, levels, conditions, and ratings. Mechanisms of the game imply certain scenarios and plots by which the game develops and in accordance with which related elements are added and characters act. The dynamics of the game are responsible for the emotional state of the students during the game; it is a factor responsible for the cognitive interest in learning and keeping it at the proper level. Characters are the participants of the game, distributed according to the roles (Willig et al., 2021).

There are four types of basic player characters: rivals, careerists, explorers, communicators (Tsarapkina et al., 2021).

The first type is players whose goal is to demonstrate their own knowledge and skills, to defeat their opponents, and to prove their own advantage. The task of players of the second type is to compete on their own system of play, not with other participants. Their priority may be to gain experience. Participants of the third type prefer to explore the game

"inside", so for them, the levels and experience points do not matter much. The fourth type of player focuses on interaction with other players during the game.

According to the intensity of the organization, gamification can occur at three levels (Manzano-León et al., 2021). The intensity of the game depends on how much immersion the student needs in the game process. See Fig. 3.

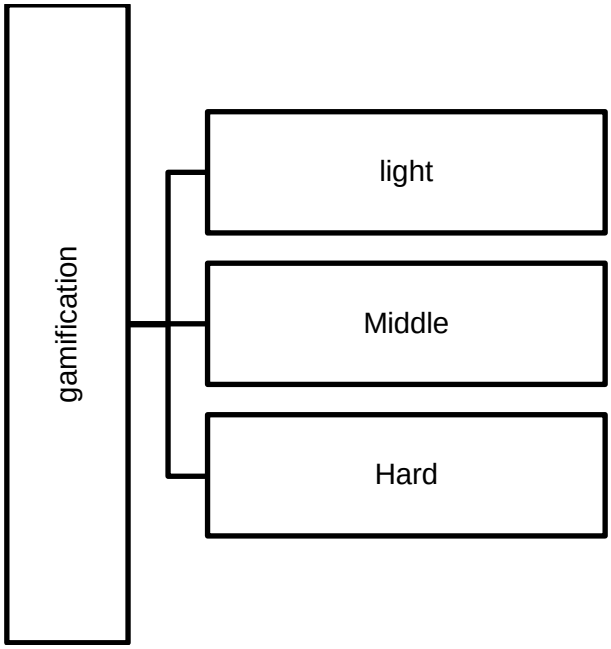

Fig. 3. Levels of the game assembly according to intensity.
Source: author's development.

As can be seen from the figure, the intensity of the organization of the game has three levels: light, middle and hard.

The peculiarity of the light level is that the process of the game takes place in a light form, does not change the basic mechanisms of learning, but gives more dynamism to the activity. At this level, it is possible to use separate game elements - points, ratings, encouragement, support, for example in the form of likes or emoji. Gamification of light level is more appropriate to use at the initial stages of introducing this method in the educational process. However, it should not be forgotten that students should learn, not play when implementing this option.

The middle level implies a more significant expansion of opportunities and elements of the game in the learning process. During this variant of the organization of training, there is already a certain plot and story, but there is no distribution by roles.

The middle level of gamification is appropriate for team or group work. Under such conditions, each group can have its own name, place, or position in the ranking they occupy in the process of performing game tasks.

This level of gamification will be relevant and effective when a certain curriculum has already been created, its content, purpose, and objectives are highlighted, which allows you to understand at what stages it becomes possible to add game elements and to what extent.

The peculiarity of the hard level is that when organizing training in the game scenario students are distributed in roles. In this case for the game certain conditions are created, rules are set, appropriate tasks are selected, which students must perform by the distributed roles.

According to the types and levels of organization of gamification in education, we can talk about the ways of applying gamification in classrooms, which can be divided into four: reorienting the interaction between students in class; reorienting the structure of class; redistributing roles between students in the group; using bonus experience points instead of grades (Buckley & Doyle, 2017).

The application of gamification elements to improve the efficiency of the learning process requires the creation of a comprehensive model built on the synthesis of general didactic and specific principles (Fig. 4).

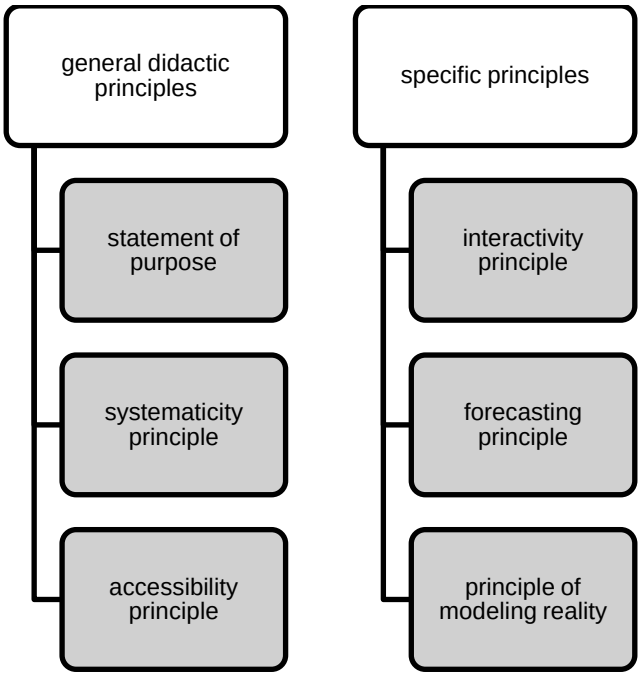

Fig. 4. Fundamental principles of gamification.
Source: author's development.

General didactic principles include the principles of goal setting, consistency, and accessibility (Vargas-Macías et al., 2020).

The principle of goal setting implies that the game is aimed at achieving a very specific and clearly defined learning goal. The filling and implementation of the game is carried out according to this goal.

The principle of consistency determines the involvement of the gamification method in the system of other teaching methods because game technologies cannot be isolated from other teaching methods and means; and, on the contrary, they should complement the results or compensate for the shortcomings of other educational methods and technologies. Consequently, each training session, as well as the educational process as a whole, should be considered comprehensively and systematically, in full interaction and synthesis of all teaching methods and means.

The principle of accessibility is especially important because it is a question of understanding the goals and rules of the proposed game. Here much depends on the skill of the teacher, because it is he or she who must take care that the rules of the game are clearly formulated and understood by all participants, the rewards are accessible, but not too easy.

In addition to the above-mentioned general didactic principles, the effective application of gamification as an innovative learning technology contributes to the implementation of more specific principles such as: the principle of interactivity (stimulates the involvement of all participants in the learning process), the principle of anticipation (provides the formation of a common goal of the game, generation of an action plan, preparation of a scenario, the definition of the game rules, etc.), the principle of reality modeling (sees the development of the game by a certain model of real life, socially or professionally significant situation) (Vargas-Macías et al., 2020).

In general, to implement a game in the learning process, it is necessary to develop and think in detail the plot and scenario of the game according to the desired end goal, the system of game characters and the mission of each of them, the story that will be presented throughout the game, levels of goal achievement, criteria for accruing bonuses and points, the reward system (Głowacki et al., 2018). It is also necessary to take into account the fact that any game should be limited in time and provide feedback after its completion for further changes.

Instead of using the traditional educational grading system in the classroom during the game, it is more appropriate to use experience grades, according to which the steps that students will climb in the process of mastering the learning material and acquiring certain knowledge can be developed.

Gamification can be used in the teaching of different disciplines and at different stages of the lesson. However, to organize a lesson with the addition of game elements special technical means are usually needed. The choice of tools is determined by the final goal and objectives of the lesson. It may be the addition of video and audio content, graphics, templates, maps, etc. Today is already actively used a number of Internet platforms and applications aimed at implementing game moments in the classroom, among them Kahoot, Joomla, Learning Apps, Drupal, WordPress, and others. Some applications offer standard game scenarios, others have a flexible format (Bicen & Kocakoyun, 2018).

One of the most common applications that can be used in the learning process to create playful moments is the Miro virtual online board, which has a number of interactive tools in its arsenal. It opens up the possibility of designing and creating countless interactive games with different plots. Participants in such quest games can play the role of travelers, superheroes, rescuers, detectives, etc. (Malegiannaki & Daradoumis, 2017). An example of a game of such a format could be, for example, a web quest Theatral to test the level of formation of professional communicative competence of future specialists in the field of culture and arts. Work on the quest not only provides a test of basic knowledge and lexico-grammatical skills on the topic of “Theatre Art” but also provides a number of tasks containing work with visual materials (theater map, stage, make-up rooms, etc.) and native foreign languages, analysis of foreign language information presented both in written (play script) and oral (actors' performances) forms.

Another variation of the above method is the most popular game of the present Among Us, which involves assigning roles, allocating certain characters, each with their own mission, receiving points, and rewards for correct answers (Xu et al., 2017).

At more advanced stages of training, it is advisable to use more complex composition and organization of games, which are based on tasks of a complex nature. These can be, for example, group quests in the course of which students should discuss a given professional topic, organize a debate, and argue their position. Quests are peculiar game tasks that imply the presence of a plot. The quest gives structure to the game process, organizes the plot. Work on quests promotes the actualization of the professional knowledge received and the strengthening of interdisciplinary connections (Jakshylykov & Nurmatov, 2016).

Gamification can be used as a form of controlling the assimilation of learning material. For this purpose, as a rule, it is proposed to perform complex tasks. For example, at the final stage of studying a certain topic, it is advisable to conduct quizzes using the Internet platform Kahoot, etc.

Different phrases can be used to change the interaction or role allocation in the gamification process, which will be used in communication. To change the structure of the lesson, the instructor can offer students to perform practical and modular tasks in game form.

The choice of gamification elements, on which the progress and interest of the game depend, deserves special attention. Gamification elements include: points (necessary to track game progress), awards or medals (additional bonuses for special achievements and successes), levels (thematic sections from easiest to hardest), virtual currency, etc. (Hamari & Keronen, 2017).

The advantage of gamification among other teaching methods is that the game helps students get rid of the fear of failure, the fear of making a mistake. In a game, it is possible to go through the level again after working on mistakes or mastering a new space. In addition, tasks can be made harder or easier according to the level of the game: for example, as in a normal game, after passing a level there is a transition to the next, next level with new tasks.

The analysis proves the relevance and necessity of introducing gamification elements in the educational process, using fully or partially game elements in training sessions. However, in practice in higher education institutions during the professional training of specialists, in particular the sector of culture and art, this direction has not received to date significant development and application. This is evidenced by certain studies conducted at the ZHEI (KZVO "DANO" DOR", NTU "DP", etc., where these specialists are trained. A questionnaire survey was made of 50 teachers and 450 students/trainees at the selected institutions. The results of the survey have testified to the low popularity of gamification as compared to other methods of teaching. The biggest number of votes is still given to the traditional approach to learning - 124, next comes competency-based learning which was chosen by 102 respondents, distance learning has spread learning - 84 answers, the project method is gaining popularity - 70. The least number of responses was given to CLIL learning - 54 and gamification - 64. The survey data are shown in Fig. 5.

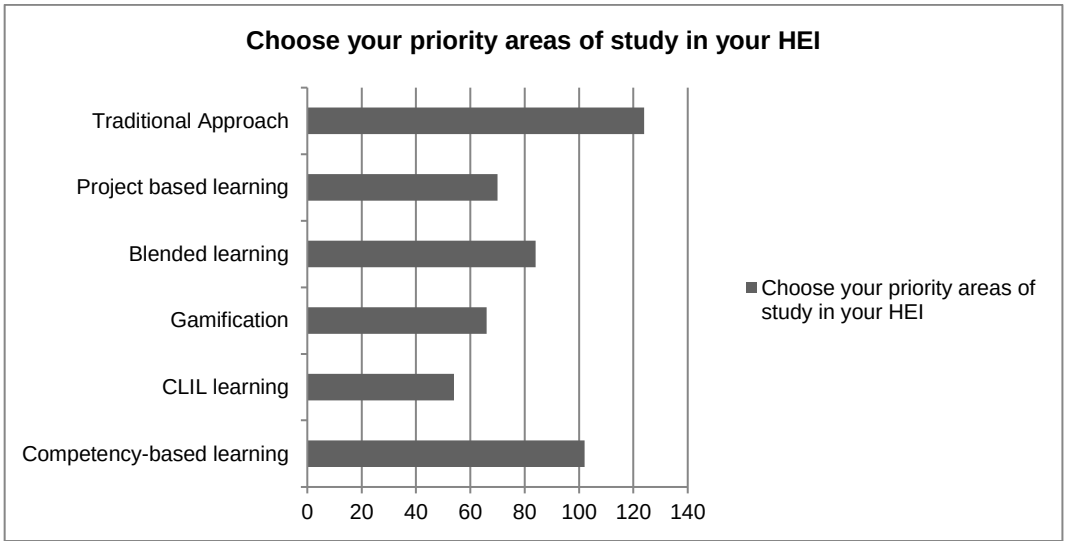

Fig. 5. Distribution of indicators of the popularity and prevalence of teaching methods. Source: author's development.

In our opinion, the main reasons for the unpopularity of the gamification method are unpreparedness of the teaching staff of higher education institutions to apply this method in the educational process, lack of technical or other opportunities for the implementation of this method, lack of awareness of the opportunities and advantages of this method.

Undoubtedly, it is necessary to popularize the gamification method in education, but one should not forget about its percentage ratio to other forms of work. The application of gamification in the educational process does not exclude traditional forms of classes, which include lectures, practical and laboratory classes, seminars, colloquiums, scientific meetings, where the necessary educational material is presented.

Based on the studies conducted, it can be noted that gamification, like any teaching method or technology, has a number of advantages and disadvantages. Among the positives we can mention interactivity, increased motivation for learning, facilitation of immersion into the subject of learning, possibility to quickly apply the acquired knowledge in practice, involvement in the activity process, the disappearance of fears due to the lack of critical consequences, collective cohesion, etc. In addition, game elements are designed to captivate students, stimulate cognitive interest, increase attention, have a positive effect on self-organization and self-improvement. Moreover, in the conditions of partial transition to the distance learning format, the gamification method can enhance students' inclusion in the learning process by engaging sensory systems and influencing emotional centers.

Among the negatives are the following: the transition from the passion for the game to unhealthy excitement, and, as you know, constant and unhealthy competition can create tense relationships in the team and group, which affects the overall atmosphere of the class; refocusing the goal - the emphasis is not on gaining knowledge, but on getting a reward; significant time spent on teacher training.

The role and place of the teacher in the process of applying the gamification method in the educational process deserves special attention. It should be noted that it is the teacher who has the task of adapting educational and methodological material to the game program shells. That is why the game developer (teacher) should have knowledge not only in the discipline taught but also in pedagogical psychology, pedagogical design, and partially Web-design.

In general, elements of gamification in the process of training future specialists in culture and art cultural, artistic, and pedagogical specialties contribute to increased motivation for cognitive activity through interactive learning, design of educational games, and plot. The set game tasks develop intrinsic motivation to perform educational tasks and achieve educational goals.

Consequently, gamification is a modern method that helps to stimulate and maintain students' interest in the learning process. However, the said method is better used as an

additional one, although it is capable of influencing the universal way of building the educational process.

5. Conclusions

The application of gamification in the training of future specialists in higher education institutions of Ukraine is due to the importance and necessity of changing the educational process to develop students cognitively and personally, to acquire the necessary competencies and experience, sufficient for the future professional activities.

Gamification uses game elements but is not a game that allows adding elements of interactivity, entertainment, multimedia to the learning process. Applying the game in the learning process opens up the possibility of additional motivation, which is facilitated by such factors as competitive elements, prize incentives, the logic of overcoming obstacles, etc. Throughout the learning process elements of the game, help to increase interest in the studied subject, stimulate the acquisition of positive self-esteem of the contribution to the collective and individual work, provide opportunities for learning information in an interesting and familiar to students' game format.

The use of gamification in the educational process is aimed at the implementation of competence and activity approaches, as it involves all participants in active educational activities, stimulates them to solve complex problems, demonstrates the level of formation of general cultural and professional competencies. At the same time, the forms of gamified approach implementation may differ and contain both classroom and extracurricular forms of work, team, group, and individual learning activities.

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Problems and prospects of the development of creative design thinking of higher education students in the conditions of digitalization

Problemas y perspectivas del desarrollo del pensamiento de diseño creativo de los estudiantes de educación superior en las condiciones de la digitalización

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Abstract

The modern development of education is focused on acquiring special work skills: quick adaptation to working conditions, ability to work in a team, thorough knowledge of digital technologies, which are combined in the design thinking. The purpose of the article is to analyze the problems and prospects of creative design thinking of higher education students in the conditions of digitalization. The work is written on the basis of the use of general scientific cognitive research methods and special pedagogical methods: analysis, synthesis, induction, deduction, generalization, specification, abstraction, observation. The results of the study analyzed the importance of digitization of education and design thinking, the history of the concept of "design thinking" and the peculiarities of its use, problems of using digital education in design thinking. The conclusions summarize that the correct use of this technique can not only create a creative learning atmosphere but also affect its effectiveness in general. In order for the design thinking technology to be as effective as possible, we offer our own recommendations for its use: systematic identification of empathy by teachers for students, critical analysis of the application of this technique, its constant improvement, experimentation with various tasks.

Keywords: design thinking, digitalization, problems, perspectives, creativity.

Resumen

El desarrollo moderno de la educación se enfoca en adquirir habilidades especiales de trabajo: rápida adaptación a las condiciones de trabajo, habilidad para trabajar en equipo, conocimiento profundo de las tecnologías digitales, que se combinan en el pensamiento de diseño. El propósito del artículo es analizar los problemas y las perspectivas del pensamiento de diseño creativo de los estudiantes de educación superior en las condiciones de la digitalización. El trabajo está escrito sobre la base del uso de métodos generales de investigación cognitiva científica y métodos pedagógicos especiales: análisis, síntesis, inducción, deducción, generalización, especificación, abstracción, observación. Los resultados del estudio analizaron la importancia de la digitalización de la educación y el pensamiento de diseño, la historia del concepto de "pensamiento de diseño" y las peculiaridades de su uso, los problemas del uso de la educación digital en el pensamiento de diseño. Las conclusiones resumen que el uso correcto de esta técnica no solo puede crear un ambiente de aprendizaje creativo sino también afectar su efectividad en general. Para que la tecnología del pensamiento de diseño sea lo más efectiva posible, ofrecemos nuestras propias recomendaciones para su uso: identificación sistemática de la empatía por parte de los maestros hacia los estudiantes, análisis crítico de la aplicación de esta técnica, su mejora constante, experimentación con varias tareas.

Palabras clave: pensamiento de diseño, digitalización, problemas, perspectivas, creatividad.

1. Introduction

Today's information society dictates additional requirements for higher education applicants, especially valued by today's employers. In particular, it is important to develop creativity, the ability to adapt quickly to the work environment, teamwork, and a thorough mastery of modern digital products. Researchers, in particular, have found that ideally all these and many other skills develop design thinking. This method of work is fairly new, so the relevance of its research is extremely promising. Although in textbooks it is often associated exclusively with the art of design, in fact, design thinking has only a consonant name, and the horizons of its use are very wide. At the same time, the COVID-19 pandemic has opened up another side of getting education: distance education based on the use of digital technology and multimedia competence. The combination of all these components will allow to reconsider certain aspects of education and practical training of future specialists, to determine the positive and negative sides of the use of creativity in the conditions of digitalization. Therefore, the purpose of the article is to investigate the problems and prospects of creative design thinking of higher education applicants in the conditions of digitalization. Let us note that from this point of view the proposed problematic has hardly been investigated because specialists have mainly concentrated around individual problems of studying the benefits of design thinking. At the same time, a detailed consideration of this issue would shed a little lighter on the specifics of the functioning of human creativity, and imagination and the ways in which they are combined through design thinking and digital technology.

2. Literature Review

The article draws on the work of contemporary educators. Significant attention is paid to general pedagogical works. In particular, Malik & Ubaidillah (2020) investigated the peculiarities of the development of the modern learning system and analyzed innovative methods of teaching based on the use of digital technology. Cherng & Davis, 2019 highlighted the role of multiculturalism in modern educational processes. At the same time, the authors also characterized the main problems of the development of modern education. Despite this, there are few separate works devoted to the analysis of the formation of creative design thinking. For this reason, the works of American and British researchers dealing with the problems of defining the technology of design thinking both in education and in business seem weighty. In particular, Cezzar (2020) characterized the importance of design in various spheres of human activity: economics, management, education, art, etc. At the same time, the author focused on the study of graphic design. Dam & Siang (2022) investigated the specifics of using design thinking in education. They note that the effectiveness of this technique lies in its step-by-step application. Dam & Siang, 2022 also explain the popularity of using design thinking techniques in their work. Temple, 2018 characterized the methodological foundations of design thinking and described the main advantages of this competence in today's world. However, the main disadvantage of this monograph is that the author focused on highlighting the peculiarities of design thinking formation among design students (primarily graphic design). This limits the possibility to comprehend the meaning of design thinking technology for other (non-

artistic) majors. At the same time, Pande & Bharathi (2020) characterized the theoretical foundations of design thinking. However, these scholars focused on analyzing the role of this competency for professionals in the business field. Consequently, it is evident from the literature that professionals focused on the narrow use of design thinking technology. Instead of wide attention requires the problem of cooperation of different spheres of this technique, however also through a prism of development of modern educational digital technologies.

3. Methodology

This work is formed on the basis of using general scientific cognitive research methods: analysis, synthesis, induction, deduction. On the basis of the analysis, it was possible to divide the subject of the research (technology of creative design thinking) into parts (terminological explanation of the concept of “design thinking”, features of the use of this technology, problems, and prospects of its implementation (coverage in the discussion)). the selected parts into a single whole, which helps to create clear conclusions on the issue under study, based on induction it was possible to highlight the main practical stages of design thinking, and the article is built based on deduction application. research The article also used By means of the historical method of research it was possible to trace the peculiarities of the use of the concept of “design thinking” through a historical prism. The paper notes that the first such definition appeared in a monograph of the same name by American Harvard University professor Peter Rowe in 1987. Some attention in the study is focused on empirical methods. For example, the main problems and perspectives of design thinking implementation as an innovative technology influencing creativity formation are highlighted with the help of the predictive research method.

4. Results and Discussion

Digitalization of education and design thinking

The challenges of today's information society are dictating new work rules. In particular, a number of advantages that employers are beginning to look for in higher education applicants are becoming important. Among these advantages that are being prioritized is media competence, which is very important for today's digitalized technology work. The foundations of this process should be laid while still in school - universities or colleges are already talking about more thorough development (Cherng & Davis, 2019). The process of digitalization of education contributes to the emergence of various methods that aim to improve the learning system. For this reason, today's innovative ways of education seek to: 1. to personalize the learning system by introducing personal, educational trajectories. 2. Promote the active use of both group and individual forms of learning. 3. Promote the strengthening of students' motivation. 4. To develop stable monitoring of education and the dynamics of learning growth in students. 5. To promote the involvement of students in different types of learning: full-time, distance, mixed. 6. accelerate the process of forming the necessary skills within the profession obtained, which is achieved through the

digitalization of the learning and educational process and automation of certain stages. 7. Facilitate the organization of a unique opportunity to work with objects (digitally) that in real life pose a threat to the life and health of students. 8. Increase interest in the student's chosen professional activity. 9. create new and expand existing opportunities for inclusion. 10. Promote the immediacy of direct and feedback between the instructor and the student. 11. Shape and support the project-based nature of teaching and learning activities, integrated practical-theoretical learning. 12. To promote promptness, the appearance of dynamic, objective assessment of the results of students' mastering the basic disciplines. 13. Tracking of educational based on means of cumulative assessment (it is said about the rating system of portfolios, etc.). 14. increasing the territorial range of accessibility of educational programs. This will allow to involve in the educational process the students living in the regions affected by the war. 15. openness and transparency of the education system both for its participants and for outside interested persons and organizations. The above problems can be solved by digitalization and its methods.

The COVID-19 pandemic demonstrated that educating students in a viral pandemic is possible with pre-prepared telecommunication and personnel infrastructure and security measures. For this reason, higher educational institutions in Ukraine have completely switched to a distance learning format since 2020. In the current situation, the electronic information educational environment plays a significant role in the organization of the educational process. At the same time, both students and teachers experience many difficulties when using digital university environments. As a result, the optimization of the electronic information environment becomes an urgent problem for many universities. Despite this, there are now many tools that are used to optimize distance education systems.

At the same time, the process of distance education system optimization is impossible without the use of design thinking methods. It is the latter that can solve the above-mentioned educational needs to the fullest extent. We believe that design-thought technology allows building this optimization process most organically and efficiently and achieving its main goal. We are talking about the comfortable and effective use of electronic information environment in universities by both students and teachers (Temple, 2018). In addition, based on conducting optimization with the help of design thinking methods, resource costs can be significantly reduced.

What is design thinking?

There is no generally accepted definition for design thinking - this method is quite new, so there are still disputes between supporters and practitioners regarding its exact definition. Due to the fact that this concept is interdisciplinary modern authors explain it in different ways. This definition first appeared in a monograph of the same name by the American Harvard University professor Peter Rowe in 1987. At the same time, upon a detailed reading of the content of this book, it becomes clear that the concept under study is used primarily in architectural design, which does not correspond to its modern understanding, which is used.

Therefore, the modern understanding of design thinking is more appropriately associated with use in the consulting business, particularly in the private firm IDEO. The firm's strategy is a good example of the transformation and use of design thinking - it was a journey from product development to the expansion of product use services, improvement strategies, and even the development of training or social programs related to its promotion (Dam & Siang, 2022). Unfortunately, proponents and early practitioners of design thinking in business did not record a clear definition, often referring solely to the experiences of designers, their experiences with principles, tools, approaches, and methods (Amatullo et al., 2021). Definitions of the type of use of multidisciplinary problem-solving design methods to overcome the innovative challenges of our time have also been proposed.

We believe that among business representatives, a detailed definition was offered by Thomas Lockwood, former president of the Design Management Institute. He, as a representative of an association of design practitioners associated with business structures, argued: design thinking is a human-centered innovation process that emphasizes observation, collaboration, rapid learning, visualization of ideas, rapid prototyping of concepts, and simultaneous business analysis (Larraz-Rábanos, 2021). There are strong objections to the nomenclature of design thinking, particularly the inclusion of the word “thinking”. However, many researchers still argue about the importance of using the word “thinking”. It can be misleading because the very process of design thinking involves not only a reflection but also direct action, which means that it is not worth limiting oneself to a mere definition. However, no alternative has been proposed, so “design thinking” remains an acceptable term to describe this phenomenon.

At the same time, Goldschmidt believes that design thinking is an approach to solving complex problems that is not related to a person's natural endowment (Goldschmidt, 2021). The researcher explains that it is this characteristic that distinguishes design thinking from art. Researchers at Stanford University School interpret the concept in this way as a special method of thinking that focuses primarily on human development. (Stanford d.school, 2018). Researchers at the Hasso Plattner Institute compare design thinking to an approach that influences innovative problem-solving. T. Brown describes design thinking as a discipline that, using design approaches and methods, integrates people's needs with technological capabilities and viable business strategies, turning them into customer value. Based on the analyzed terminological discussion, let us propose the actual definition of design thinking - an educational methodology designed to develop creative skills, in which anthropology is central. Despite this, the main essence of design thinking methodology lies in its human-centeredness, i.e., its focus on human beings. At the same time, design thinking includes many methods and tools, the choice of which largely depends on the goals and scope of research.

How to use design thinking technology?

Design thinking focuses on the use of basic design principles that influence the emergence of innovative new or additional products (services) (Goldschmidt, 2021). However, the key criteria for applying design thinking in education are the principles of human-centeredness, experimentation, collaboration, and complicity. The process of creative formation consists of several periods. The first stage is empathy: here takes place the definition of the main idea of the designed product. Students have to check everything that relates to the solution of the design problem. They are engaged in the analysis of available information, for this they collect all the necessary data. At this stage, it is possible to use other pedagogical innovative teaching methods: questioning, brainstorming, designing, interview method. The main criteria for the use of the brainstorming technique is a specific formulation of the question about the form, intensity of the team. The current literature proves that the use of the brainstorming technique results in students developing skills to solve typical problems in atypical creative ways (Larraz-Rábanos, 2021). Focusing is the second stage of design thinking formation, in which there is a distillation of the information obtained. The main questions that the student must decide at this stage are what exactly he or she is researching, what problem needs to be solved, etc. At this stage it is allowed to change the initial concepts, to eliminate various problems, and contradictions, to clarify details. This stage is replaced by a period of idea generation. The main mechanisms of design thinking development at this stage are brainstorming, storytelling (composing and narrating various kinds of stories), mental maps, etc. The key goal of the idea generation stage is to compose the most possible ways of solving a problem. The next stage is prototyping - the formation of a minimally viable product (or service). Here, a preliminary product (or service) is created with such qualities, which could satisfy the first possible customers. It should be noted that the use of this technique, above all, affects the economy of time. At the same stage, the first (positive or negative) feedback on the product (service) being created occurs. Note that the key characteristics of the project evaluation are its originality, functionality, uniqueness, etc. Meanwhile, technological and aesthetic factors are also important (Dam & Siang, 2022). The testing phase is the final stage for any project created. At this stage, it is important to involve the final consumers to evaluate the created product. At the same time, the re-evaluation of the corrected version can also take place here (Larraz-Rábanos, 2021).

Currently, the technology of design thinking is actively used in education as well as in business. Consequently, individuals with creative design thinking are now particularly valuable in the job market. For this reason, today's companies are competing to attract them (Schallmo, 2017). Note that mastery of this technique affects the development of both personal creativity and creative corporate culture. The latter promotes team unity around a complex problem.

Design Thinking in Digital Education: Problems of Use

Modern experts prove that design thinking can improve the learning process, make it more active and interesting for higher education applicants. The focus of standard educational methods is on content transfer. At the same time, design thinking makes learning a creative process by developing students' critical thinking and challenging them to think creatively (Dam & Siang, 2022). Teaching based on design thinking builds students' critical thinking skills, creativity. Students, when solving complex and atypical problems, tend to be curious, enthusiastic, creative, and inventive. In the design thinking technique, the main participant of the learning process becomes a human being.

The teaching and application of design thinking by education applicants faces certain difficulties. In particular, an important problem is finding and identifying truly new ideas that will be of value to potential consumers in the long run. Based on a review of the scientific literature, we can summarize that:

1. The people on whom decisions depend on have problems with proposals for innovation. For example, the heads of business structures are conservative, it is very difficult to convince them.
2. Users, who are familiar with the new product, find it difficult to characterize its benefits because there is nothing to compare the innovation with adequately.
3. It is difficult for decision-makers to foresee the benefits of the product for users.

In fact, each of the proposed problems at its core experiences only one thing - difficulty in forming new ideas. This process is well known to psychologists who study the imagination. First of all, outside the imagination, very often there are features or consequences of our imagined actions, although they can be extremely tangible (Malik & Ubaidillah, 2020). Also, human imagination tends to project contemporaneity into the future, that is, to really consider our actions, provided that the environment remains constant. The development of the environment is usually much more difficult to calculate because we are able to respond and predict first and foremost our own actions. Also, a certain clear image is formed in the imagination - the result of actions (Lewrick, et al., 2019). At the same time, one is almost incapable of recognizing that real things may look different when imagined actions are put into practice. For this reason, there is a danger of projecting the present into the future, even though many variations of events are likely. People tend to overestimate the degree to which their future event experience will be similar to their current event experience.

The use of digital technology, we believe, will partially solve these problems. The modern development of technology is an important component of the educational process. So, properly using the possibilities of information retrieval, it becomes possible to overcome potential conservatism. We believe that the mastery of media competence already at the educational level will lead to the possibility of proper presentation of the results of the work. That is, it becomes easier to make sure that the project is really relevant.

Also, the digitalization of the educational process makes it possible to take into account the wishes of more users. The informality of the setting will lead to the expression of a truthful impression, and the use of the possibilities of the Internet for comparison will be the key to the expression of advantages. So, the use of digital technology greatly facilitates the work with the audience. In addition, the development of a software product also shapes the imagination, allows you to quickly model possible solutions, and qualitatively work with the design.

Design thinking and creativity of students, in general, will form faster when using digitalization of learning. The development of media competence and exposure to the latest software developments should be an important aspect in today's pedagogy.
To make the technology of design thinking as effective as possible, we offer our own recommendations for its use based on practical work with students:

1. Systematic discovery of empathy with students.

We believe that empathy promotes understanding and acceptance of the needs and interests of each participant in the educational process. In addition, teachers, using empathy, can tailor the educational program to the capabilities of each student. When an instructor is empathic, he or she will be closer to the students. How can the modern instructor improve this skill? You should communicate more with students, find out what they are interested in, what their interests are, observe their reactions and behavior. We believe that this skill will not only improve the teacher's communication with students but will also affect the effectiveness of learning.

2. Critical analysis of our own pedagogical methods.

The point is that the modern teacher should question current ways of teaching. In addition, educators should critically analyze the teaching methods they predominantly use. This will make it possible to realize which methods are effective and which are not. For example, the educator should practically trace the effectiveness of using design thinking techniques on different groups of students. We also recommend the teacher to experiment with teaching methods more often, to improve them constantly. This will contribute to the emergence of new unique educational methods.

3. Experiment - as a basic condition for teaching

An important prerequisite for effective creative learning is continuous improvement. Teachers need to test new methods and create opportunities for feedback. Particularly for design thinking technology, this is important. This is how educators learn what students like in lectures and what they need to improve in seminars, etc.

4. Dissemination of experience with the methodology

Educators should share their experiences with other educators and be open to open discussion.

5. Original tasks – is an important condition for the formation of design thinking

For design thinking technology to be as effective as possible, teachers should come up with their own original tasks for students. A prime example is the “social project competition” task. Students should create their own projects to solve a certain problem. These problems can be diverse: global, national, or local. At the same time, the instructor can suggest their own problem for students to solve, or they can let them choose the topic they are most interested in. They can choose projects on a variety of topics: human rights, immigration, war, ecology, violence, climate change, etc.
In addition, teachers can ask students to create their own portfolios in which they present creative solutions to certain topical problems.

Another example of the use of design thinking in the humanities is the application of historical knowledge to solve urgent world problems. For example, students seek a solution to a contemporary migration problem through a study of the history of immigration to the United States. Regardless, they can use a variety of sources in such a study: historical materials, migration acts, contemporary news, blogs, descriptions of political campaigns, music, video debates, song lyrics, etc.

6. Task clarity

The teacher needs not only to come up with original and atypical tasks but also to be able to form them clearly. Tasks should be clear, understandable, and accessible to students.

Future Design Thinking: Your Own Judgments

Design thinking in digital technology is a relevant area of development for those companies that aim to successfully work on creating creative and innovative software. This process allows us to target people's preferences regarding the appearance of technological products. For this reason, the importance of studying design thinking for applicants to higher education in computer science or software engineering is growing considerably. Such development of creative, analytical, and imaginative thinking can better prepare students for the developments and challenges facing today's software development industry.

There are powerful unifying initiatives in business education emerging in the development of a large number of higher education institutions. These range from the direct introduction of design programs into modern business education to the formation of merging ventures that exist between educational institutions and private companies for

practical supplementation. At the same time, an amalgamation of new primary disciplines is taking shape, where both design and management will be taught together. Many modern business education programs for future professionals at universities contain design thinking in their offerings to educate students in business and management-related majors. Many universities have been working in this direction for a long time on their own or through affiliations with specialized programs. Note that such a dynamic industry is constantly undergoing change, as the internal capabilities of educational institutions develop, including merging design and business schools, and alliances are formed within or between different schools of higher education. This leads to “creative” experiments with curricula, and many disciplines and programs have been adapted and are undergoing change due to the increased attention to design thinking on the part of employers.

5. Conclusions

So, design thinking is an important technique in modern education, training of future specialists. The history of this concept is ambiguous because of the “young age” of design thinking its meanings and definitions researchers still have not had time to understand correctly. In particular, the word “thinking” can mislead, because it is connected only with reflection. It can mislead because the process of design-thinking is connected not only with reflection but also with direct action, that is, it is not necessary to be limited only to the definition. However, no alternative has been proposed, so “design thinking” remains an acceptable term to describe this phenomenon.

The application of digital technologies in the educational sphere will partially solve urgent problems. We believe that by properly using the capabilities of information retrieval and digital information and communication technologies, it becomes possible to overcome the potential conservatism of the educational system. Design thinking and creativity of students, in general, will be formed faster when using digitalization of education. The development of media competence and familiarity with the latest software developments should become an important aspect of modern pedagogy. Despite this application by education applicants, design thinking has some problems. For this reason, finding and identifying truly new ideas that will have value, in the long run, is an important challenge. However, the proper use of this technique can not only create a creative learning environment but also affect its overall effectiveness. In order for design thinking technology to be as effective as possible, we offer our own recommendations for its use: teachers' systematic identification of empathy for students, critical analysis of the use of this technique, constant improvement of it, experimentation with different tasks. Despite this, weighty conditions of the formation of design thinking in higher education applicants are originality and clearness of the set tasks.

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Formation of information competence of future specialists of culture and arts in the process of professional training in higher education institutions

Formación de la competencia informativa de los futuros especialistas de la cultura y las artes en el proceso de formación profesional en las instituciones de enseñanza superior

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Abstract

The article examines the role and importance of information competence. The main attention is paid to the analysis of the teaching experience of university teachers from different European countries, a set of courses and disciplines that are offered for use in the training of culturologists and art critics. Accordingly, the purpose of the work is to analyze the features of the formation of information competence among specialists in culture and arts in the process of professional training in higher education institutions. We used particular methods as synthesis, analysis, induction and deduction, methods of comparison and abstraction. The conclusions state that during the study students get acquainted with the basics of information competence during theoretical courses, but work with its use is based on practical use. An analysis of the curricula of several European universities has shown that the integration of this element into the educational process is linked to practice.

Keywords: Education. Teaching. Culture. Art. EU.

Resumen

El artículo examina el papel y la importancia de la competencia informativa. Se presta especial atención al análisis de la experiencia docente de profesores universitarios de diferentes países europeos, un conjunto de cursos y disciplinas que se ofrecen para la formación de culturología y crítica de arte. En consecuencia, el propósito del trabajo es analizar las características de la formación de la competencia informativa entre los especialistas en cultura y artes en el proceso de formación profesional en las instituciones de educación superior. Se utilizaron métodos particulares como la síntesis, el análisis, la inducción y la deducción, los métodos de comparación y la abstracción. Las conclusiones afirman que durante el estudio los estudiantes se familiarizan con los fundamentos de la competencia informativa durante los cursos teóricos, pero el trabajo con su uso se basa en el uso práctico. Un análisis de los planes de estudio de varias universidades europeas ha demostrado que la integración de este elemento en el proceso educativo está vinculada a la práctica.

Palabras clave: Educación. Enseñanza. Cultura. Arte. UE.

1. Introduction

Today's information society presents students and university professors with new challenges that require a timely response. We are talking about the increase in information flows, the quality and reliability of disseminated information, news, analytical assessments, etc. Orientation in a complex set of diverse information, which may contain cardinally opposite conclusions, requires flexible transformations and a certain rethinking of modern higher education curricula. The competencies required for proper information

discovery work have only relatively recently become an important subject for consideration and detailed analysis.

Accordingly, these issues are extremely relevant in European humanities, including cultural studies and art. The latter items are very important parts of identification and self-identification in the globalized world. For this reason, the study of information competence formation in future specialists of this direction requires further development and new recommendations for implementation. The article aims to analyze the formation of information competence of future specialists of culture and arts in the process of professional training in higher education institutions. However, the difficulties of integrating information competence into the educational process, which is related to the adaptation of the educational system to modern requirements, remain poorly studied issues. It is also important to compare the experience of teaching in the EU countries, where the latest teaching methods are actively involved, including in the training of future specialists in culture and art studies.

2. Methods

The work used general theoretical methods of research, in particular, synthesis, analysis, induction, and deduction. As a result of using the method of comparison, it was possible to analyze the process of formation of information competence in specialists and the European Union. The work is built based on using the method of abstraction, involving the transition from generalization to conclusions and recommendations. Special attention in the research is paid to empirical methods of information collection and interpretation. The article is formed based on a critical analysis of curricula and syllabuses of disciplines. The final goal is to cover the process of formation of information competence of future specialists of culture and arts in the process of professional training in institutions of higher education. At the same time, the issue of further implementation of information educational foundations in education is characterized based on the prognostic method.

The methodological basis of the article is the works of contemporary leading educators and cultural scientists. In particular, Hussin (2020) explored contemporary challenges in culture and the arts. Richards (2019) highlighted the problem of multicultural skills in cultural studies students. At the same time, Andersone (2020) characterized the key innovations in the educational plane, certain attention was paid to the analysis of the formation of information competence as one of the weighty components of modern education Caiado et al. (2021) investigated modern teaching methods used in the educational process. So, the topic under study received a certain response in the scientific literature, however, it is partially covered, in particular, through the prism of the study of innovative teaching methods. At the same time, the formation of informative competence in the narrow specialization of culturologists and art historians has not yet received due attention in modern analytical works.

3. Results

At present, the formation of information competence of culture and art professionals occupies a prominent place in the system of general professional training. Since today the European Commission is actively supporting numerous projects for the renewal of the quality of education, the formation of different kinds of professional skills in teachers is an important task of modernization processes. At the same time, the importance of knowledge in the field of culture and art is emphasized by the fact that the European Union introduces into its strategic goals the principles of protection and development of culture and art. In particular, the investment plans, the implementation of the EU-2020 Strategy, and the further EU-2030 Strategy serve as a vivid confirmation of this. Consequently, the development of this sector is connected with the introduction of the basics of information and cultural education.

The information culture of the person is expressed in presence of a complex of knowledge, abilities, skills, and reflective attitudes in cooperation with the information environment. According to the researchers' definition, information culture is a system characteristic and an integral part of a person's culture (Kizi, 2021). It allows a person to effectively participate in all types of work with information (we are talking about receiving, accumulating, transmitting, encoding, and transforming).

Undoubtedly, mastering media culture implies acquainting teachers with its content in the first place, because if these specialists do not understand the basic requirements and teaching methods, they will not be able to justify them to students. The modern teacher of culture and art should have a high level of professional culture, give preference to creative thinking, be constantly oriented to search and novelty, to use scientific and technical knowledge to solve technical problems. This versatility contributes to opening up a wide range of opportunities to improve the educational process (Andersone, 2020). This, in turn, requires teachers to use electronic media resources in their work and to be able to plan and clearly understand the goals and objectives of their lecture and seminar classes.

Consequently, information culture is a set of knowledge, abilities, and skills of effective interaction with the rapidly changing information environment, the ability to use competently and morally the opportunities provided by it, affecting the formation, organization of life professional, and social experience. At the same time, it should act as one of the pedagogical conditions for the formation of media competence.

At the same time, in today's world, cultural achievements act as a kind of business card for social groups and even entire nations. The appeal to culture and artistic heritage is caused by the desire of elites (political, intellectual, etc.) to demonstrate the “spiritual power” of a nation (von Zastrow; Perez, 2019). Accordingly, the job of contemporary cultural and art historians is to interpret cultural achievements and integrate them into the

information space (Bista, 2021). Thus, mastery of information competence becomes the most important aspect in the training of specialists of the mentioned specialization.

We believe that information competence skills solve the following tasks of modern training in the field of culture and art. First of all, it is about developing the actions of searching and monitoring the basic information necessary for solving general cultural and art history problems. Besides, information culture influences the process of systematization, interpretation, the transformation of the general information field, using the information received from different sources to form cause-and-effect relationships (Kizi, 2021). In the field of culture and art information competence also leads to the explanation and justification of generally accepted cultural statements and influences the experience of a critical attitude to the generally accepted theses in the scientific circle (Hussin, 2020).

Cultural researchers and art historians who have information competence in their professional activities, carry out a critical review of media texts, apply rational methods of searching, selecting, organizing, and using information materials, can resist manipulation and propaganda, use computer programs, educational resources of the Internet rationally combines traditional methods with multimedia means of illustrating and demonstrating information in the learning process.

At the same time, to train such a teacher, it is necessary to develop methodological materials that provide a methodology for classes that are based on problem-based, heuristic, productive, game-based forms of learning that promote independence in the decisions made, teach how to interpret and analyze the structure of a media text, stimulate creativity in the process of creative tasks in higher education institutions. In Germany, in particular, the teaching of disciplines related to culture and the arts takes place with an emphasis on the formation of multicultural and informational competencies. An example of this is the University of the Arts, located in Berlin. Currently, four faculties (Faculty of Design, Faculty of Fine Arts, Faculty of Music, and Faculty of Historical Art) offer more than 40 different programs of study that include art history, cultural studies, pedagogy, and other aspects (Universität der Künste Berlin, 2022). Teaching in the Faculty of Design and Fine Arts is aimed at building students' information competence. In particular, the Faculty of Design teaches such disciplines as “visual communication”, “art and media”, “social and business communication”, “information culture”, etc. Thus, this university pays much attention to the formation of a critical attitude towards media resources. At the Faculty of Design there is a two-year master's program “Visual Communication”, the main emphasis of which is reduced to the teaching of visual systems, the study of the principles of formation of the advertising environment, new media.

In the Netherlands, where the teaching of art and culture is at a fairly high level, the main focus of teaching is on the development of multicultural, information, information-communication, and creative skills. At Maastricht University, where the Faculty of Arts and Social Sciences operates, the focus is on cultural studies and the study of media literacy (Maastricht University, 2022). In particular, students are introduced to its basic

criteria to help ensure the effectiveness of the educational process. The main efforts of teachers of art and social sciences are aimed at improving knowledge of the regularities of the educational process under the conditions of informatization of education, the ability to use digital resources, to evaluate technical means; to apply different standard applications, to prepare different kinds of graphic illustrations. Despite this, training is aimed at the application of various programs, Internet resources for educational purposes and to acquire practical experience in the use of educational and methodological developments taken from local and global information networks. Consequently, special attention should be paid to media education and the formation of media literacy in the learning process.

The University of Latvia has a Faculty of Education, Psychology, and the Arts, which teaches culture and the arts (Faculty of Education, 2022). The main focus of teaching here is the formation of practical skills; however, the original synthesis of art, education, and psychology lead to the implementation of innovative methods (Faculty of Education, 2022). Critical awareness of media resources and the development of students' information culture skills are important aspects of teaching in this department.

European curricula in the field of culture and the arts pay great attention to media education as a key factor influencing the formation of informational competence. In general, it aims at laying down the ability to evaluate the available resources, to be aware of the consequences of their impact on the psyche, to master the ways of communication-based on non-verbal forms of communication (Andersone, 2020). Currently, media education is seen as a peculiar process of personal development based on critical analysis, the main goal of which is to form a culture of communication with the information field. At the same time, it should form creative, communicative abilities, critical thinking, the ability to fully perceive, interpret, analyze and evaluate, to teach different forms of self-expression through the study of information texts. The literacy acquired as a result of this process helps a person to actively use the possibilities of the Internet, television press, radio, video, etc.

So, European universities offer a wide range of means of forming information competence. First of all, it is expressed in the content of curricula and their general orientation towards training specialists in culture and art studies of the modern level. Another important aspect is following an individual educational trajectory, which allows students to independently create the list of disciplines they need for further training. In addition, the involvement of elements of independent media education in practice leads to the formation of critical thinking and an active life position.

4. Discussion

Based on our analysis we can define informational competence as a certain set of knowledge, skills, and abilities concerning the effective performance of various types of information activity, solution of professional tasks with the use of the latest means and

technologies. For cultural professionals in the modern world, this competence becomes one of the key competencies, as the need for proper presentation of the results of cultural research, preserved artifacts, etc. is brought to the forefront. Thanks to mastering the novelties of the technology industry trends are formed, which allows presenting both individual achievements and elements of the national culture of individual nations.

Such a wide range of opportunities requires significant changes in the training of specialists in the field of culture. It should be noted (which is noticeably based on the results of our study): Western European institutions of higher education provide sufficient training for future specialists than in the countries of Central and Eastern Europe (including Ukraine). The emphasis on mastering practical skills when working with information competence allows you to develop your professional level by the modern requirements of the development of cultural studies (Hussin, 2020). At the same time, the passion for theoretical study leads to a difficult period of adaptation at the workplace, which is caused by the lack of experience.

It should be noted that further mastering of information competence in the training of future specialists-culturalists will lead to structural changes. In particular, we are talking about the actualization of the cognitive function of future culturologists, aimed also at the systematization of knowledge, cognition, and self-knowledge (Richards, 2019). The development of the communicative function will allow better quality work with the media of information. The adaptive function will allow adapting to the conditions of work in the modern information space. The normative function will lead to new moral and legal requirements for employers, the legal framework, and one's own work. The assessment function will provide the ability to navigate the complex conditions of work in the information space, the ability to identify sources of information, their relevance, etc. The interactive function is “responsible” for the formation of independent and active creative work, contributing to self-development and self-realization.

At the same time, on the way of further implementation of information competence in the training of future specialists in culture and arts, some problems are likely to arise. First of all, the development of the modern educational process depends on the teachers' development. The latter, in particular, should focus on using the latest electronic media resources, the ability to plan and clearly understand the goals and objectives of their lectures and practical classes. Future employers should also be involved in active cooperation in the formation of syllabuses of academic disciplines. This will make it possible to take into account their wishes in the preparation of future specialists, which will significantly reduce the risk of employment problems. Teachers of higher education institutions should have brilliant media competence, which is not an easy task in today's rapidly transforming information space. It is especially relevant in developing countries. That is, for example, in Ukraine, there is a problem of updating the pedagogical and methodological base of education, which would meet modern standards. If universities in Europe such a problem is solved, then in Ukraine it is still relevant. At the same time, deepening the training of teachers should also help to improve their teaching skills. In

turn, this will significantly increase the productivity of training of culturologists and art historians in the future.

5. Conclusions

Information competence is an important component of modern learning in the field of culture and art. First of all, it is designed to develop the skills of monitoring the received information, which will be needed to work with questions of general cultural or artistic character. In addition, its use in the educational process entails detailed processes of systematization and interpretation of the obtained data. Information competence is also important for culturologists and art historians to use its basics for forming culturological statements and critical attitudes towards stereotypes established in modern scientific literature.

Based on the analysis of curricula of universities in Germany, the Netherlands, and Latvia, we believe that these institutions of higher education offer a wide palette of means of formation of information competence. First of all, it is manifested in the general orientation towards training specialists in cultural studies and art history at the modern level. In addition, the involvement of elements of independent media education in practice leads to the formation of critical thinking and an active life position.

In the process of professional training in higher education institutions, students are introduced to the basics of information competence during theoretical courses. At the same time, more detailed work with its use takes place based on practical use. As shown by the analysis of curricula of several European universities, the integration of this element in the educational process is associated with the practice, which, for example, is not so relevant in the Ukrainian realities of Eastern Europe. Let us note that the main problem of further implementation of information competence in the educational process is the rapid development of the information society and, accordingly, the increase in information flows. Teachers and modern programs may not be as responsive to changes in the modern information space and make adjustments. We believe that one of the ways to overcome this situation would be the partial involvement of employers in the formation of the educational process, which would improve the practical training of future specialists in cultural studies and art history.

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The innovative way of development of pedagogical sciences: a modern look at the study of current problems

La forma innovadora de desarrollar las ciencias pedagógicas: una perspectiva contemporánea sobre el estudio de temas actuales

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Abstract

The article aims to identify the main innovative changes taking place in modern pedagogical sciences. The methods used to obtain the expected results: analysis of scientific sources, comparative analysis of the processed literature and its generalization, description of factual information, the method of synergy, and identification of the highest priority further innovative ways of transformation of the complex pedagogical sciences in modern conditions. As a result, the vectors of development of individual pedagogical sciences are outlined and the pedagogical conditions necessary for innovative approaches are indicated.

Keywords: Pedagogical sciences, innovations, methods of teaching and education, humanistic orientation, pedagogical technologies.

Resumen

El objetivo del artículo es identificar los principales cambios innovadores que se están produciendo en las ciencias pedagógicas modernas. Los métodos utilizados para obtener los resultados esperados: el análisis de las fuentes científicas, el análisis comparativo de la literatura procesada y su generalización, la descripción de la información fáctica, el método de la sinergia, y la identificación de las formas más prioritarias e innovadoras de transformación de las complejas ciencias pedagógicas en las condiciones modernas. Como resultado, se esbozan los vectores de desarrollo de las ciencias pedagógicas individuales y se indican las condiciones pedagógicas necesarias para los enfoques innovadores.

Palabras clave: Ciencias pedagógicas, innovaciones, métodos de enseñanza y educación, orientación humanista, tecnologías pedagógicas.

1. Introduction

Under the conditions of informatization, globalization, and synergy of education, science, and production, the problems of educational philosophy in the context of modern challenges of civilization have an impact on the person and education. Humanistic orientation of the complex of all educational sciences from human-centered, person-centered learning, continuous education to the development of adult education (andragogy) becomes important for the innovative development of pedagogical science. Considering these problems, we consider it relevant to specify some vectors of innovative development of pedagogical science, to analyze current trends of functioning and development of the complex of pedagogical sciences, as well as to offer our own definition of priority directions of further development of the philosophy of pedagogical science and pedagogical thought. This problem is actualized because of the challenges currently facing the world. COVID-19 pandemic opened the problem of introducing distance education, development of new methods of teaching, which require additional thinking. As a result of scientific search, and analysis of numerous studies of the development of

different areas of pedagogical science, it is possible to solve a number of problems: creating the right conditions for the formation of an innovative personality with innovative thinking and the ability to innovative activities in the modern knowledge society with numerous information flows; preparing people for life in a global space; development of dicentric pedagogy, based on mutual respect between all participants of the educational and pedagogical process. The study of the innovative way of development of pedagogical science contributes to the level of pedagogical and psychological culture of society. The innovative context of research and analysis in the conditions of globalization and development of civilization creates the prerequisites for the integration of Ukrainian pedagogical science into the European system. The aim of the article is to analyze modern views on the research of actual problems of an innovative way of pedagogical science development.

2. Theoretical Framework or Literature Review

The theoretical part of the study is built on a thorough review of modern pedagogical literature and on the principles of summarizing the previous experience of researchers. In particular, Rajab (2018) investigated the effectiveness of education using modern online technologies. At the same time, this specialist also compared the characteristics of online learning with its traditional forms. His research was influential in identifying the potential benefits of distance learning in crisis situations. Rajab (2018) summarized that there is not much practical difference between distance or traditional learning. Consequently, online technology can be used to provide training in crisis areas, particularly in those areas that have been affected by war. Cherng & Davis, 2019 characterized major innovations in the education system. The researchers focused on analyzing multiculturalism in contemporary pedagogy. Campani et al, 2019 described innovative innovations in higher education. Dominick et al, 2020, explored key challenges in contemporary education. The researcher paid special attention to the analysis of innovations in the educational environment. Capellini et al, 2020, analyzed the features of the use of cooperative learning in modern education. The researchers note that cooperative pedagogy provides socialization, the formation of knowledge and skills necessary in life, outside of educational institutions. At the same time, Cardoso et al, 2021 characterized the phenomenon of lifelong learning, as a set of public or private educational activities that guarantee the provision of human aspirations for lifelong learning. Franco et al, 2019 characterized the features of multicultural education, and explored the importance of inclusion in the modern education system.

Ukrainian researchers have partially joined the study of this problem. In particular, Demyanenko, 2021 characterized the peculiarities of the development of the modern educational process in Ukraine. Chasnikova et al, 2021 described the key innovations in modern education based on the analysis of the programs of the New Ukrainian School. So, the literature base of the study is quite thorough. As can be seen from the analysis of the literature, modern specialists have thoroughly focused on specific manifestations of innovative educational activity. Currently, scientific professional literature lacks

comprehensive visions of the possibilities of combining different types of pedagogical innovations. In addition, the above-mentioned scientists almost did not focus on the negative manifestations of the introduction of modern innovative teaching methods. Also, modern scientific studios do not comprehensively study the priority innovative methods of transformation of the complex of pedagogical sciences. Consequently, a comprehensive substantiation of the features of the implementation of innovative approaches is the purpose of our study.

3. Methodology

This study is built on the use of general scientific and special pedagogical research methods. Among the general-scientific methods, the following logical research methods should be mentioned: analysis, synthesis, induction, deduction. With the help of the concretization method, it was possible to approach thoroughly to the study of STEM-education system (Science technology engineering mathematics), covering natural sciences, technology, engineering (technical creativity), and mathematics. This direction of education, in general, deepens the connection between the natural sciences and innovative technologies. Consequently, a prominent part of this study is devoted to the analysis of this technology. The article also uses the method of abstraction. It is used in moving from abstract concepts (theoretical study of modern innovative approaches) to concrete conclusions (recommendations for further implementation of innovative teaching system). Certain attention is focused on empirical pedagogical methods of information interpretation. The problem of further implementation of innovative technologies and their perspective is reflected on the basis of the prognostic method.

Strengthen the literature review on the research topic and take stock of what was obtained when consulting the research

4. Results and Discussion

Pedagogical technologies and innovations

The description of the theory of historical-critical pedagogy is based on three main aspects: the revolutionary changes in traditional pedagogy and the reactionary nature of the new (Matthews, Mclinden & Greenway, 2021, p. 1-21); the scientific of the traditional method and the pseudoscientific nature of some new methods; the democratization of modern educational institutions. The structural elements of pedagogical innovations are worked out in practice. The scientific approach to pedagogical technologies allows effective implementation of the designated educational goals; systematize, plan and reduce the unpredictability of the educational process; ensure sustainable interaction of all participants in the educational process (Demyanenko, 2021, p. 185). The growth of scientific interest in pedagogical technologies is due to the need, first, to substantiate and implement simpler and more effective ways of achieving educational goals; second, to reduce the unpredictability of the educational process; third, to give stability (stability) to the relations of subjects. The phenomenon of “educational (pedagogical) technology” has

absolute advantages. It is implemented as a systematic, consciously planned activity aimed at improving the qualifications of teachers and their competence in solving educational tasks. Accordingly, by the level of design the educational technology can be mass and universal, but by the level of its implementation - exclusively authorial. In the innovative, informational space, the function of the teacher himself changes, not just a carrier of knowledge, but the modern teacher should have the ability to implement "knowledge in action" (Dominick et al, 2020, p. 1641). In addition, the educator must be pedagogically developmental oriented, an investigator of pedagogical theory and practice, charged with multiple functions (constructive collaboration with school leadership, developing planning and other documentation, working with other institutions, etc.) (Mrvar et al, 2019, p. 110). A critical attitude towards the paradigm of modern science helps to identify different, qualitatively new possibilities of scientific activity, taking into account the social, cultural, and subjective aspects in comprehending the real reality (Fernandes & Silva, 2020, p. 1677). Foreign scholars identify a clear difference between technological innovation and pedagogical innovation. Scientific and technological progress actually provides the emergence of new information and communication technologies, but it is not a pedagogical innovation. It is pedagogical innovation that is seen in moving away from traditional methods and actively pursuing new ones, because it is important to open up to innovation, including taking into account the intercultural characteristics of different peoples (Franco et al, 2019, p. 705).

Innovative views on the development of pedagogy and the education system

Modern civilization challenges make certain adjustments in the development of pedagogical sciences: globalization leads to the simplification of borders, the creation of a single economic space and a common information sphere; there is a transition from industrial to scientific and information technologies; and there is also a threat of self-destruction of humanity (presence of weapons of mass destruction, numerous environmental problems). Therefore, the humanistic orientation of pedagogical sciences, the development of the concept of human-centrism, and the sustainable (balanced) development of society are important. The majority of pedagogical works of Vasyl Sukhomlynskyi (1918-1970), the famous Ukrainian teacher, are devoted to ideas of humanism. Today, the ideas of humanism, humanity, and charity are no less relevant to the development of pedagogical thought and are realized through the development of all intellectual, physiological, and potential capabilities of the individual. Harmoniously and the comprehensively developed person realizes his abilities and opportunities through creativity. To implement the relevant ideas, it is important to take into account the uniqueness of each, the individual characteristics of pupils, which is hereditary and formed in a particular social environment (family, immediate surroundings, and the social environment in general). Vasyl Sukhomlynskyi believed that for the spiritual development of pupils it is not enough just to get knowledge, assimilate the content of educational material provided by the educational program, and noted that it is necessary to form a moral culture.

In our opinion, the integration of pedagogical sciences into a single scientific and educational space is promising. The multiculturalism of all educational processes becomes important to harmonize the globalized world and ensure equal access to quality education in different scientific and educational systems of the world. Also, the association of institutions of higher education and production is the basis for the formation of a kind of interdisciplinary team to expand the views and determine the directions of further development of society, production, and economic spheres (Campani et al., 2019; Chasnikova et al., 2021). A relatively new approach is the introduction of cooperative learning in institutions of higher education Cooperative Learning (CL) - cooperative learning as a special methodology is widespread in the UK, USA, Portugal. According to the famous educator John Dewey, cooperative pedagogy provides socialization, the formation of knowledge and skills necessary in life, outside of educational institutions (Capellini et al., 2020, p.1688; Loudon, 2019, p. 284-286). Gender pedagogy is also a separate area of the complex of modern pedagogical sciences. We consider gender as a dimension of the social structure of society, and gender pedagogy is aimed at creating comfortable conditions for the socialization of education applicants (both boys and girls).The significant test was the pandemic caused by the spread of COVID-19 because for all the possibilities of Internet resources and the search for numerous means to implement lifelong learning, the educational institution also provides socialization of students and affects the formation of a positive social-emotional state of students, is a fairly safe environment for their stay (Montenegro, 2021). A separate challenge for education has become the introduction of distance learning, which requires a systematic and planned. At present, there are still a number of constraints for effective use: outdated stereotypes, lack of ability to use certain Internet resources for educational purposes, lack of effective pedagogical techniques, methods of implementing this type of learning, lack of proper technical support, legal uncertainty in the organization of distance learning. The continuity of the educational process is also ensured through the implementation of online resources for learning, which are interesting to consider from the perspective of Edgar Morin and given his seven modules, in particular, the sixth module “learning to understand”. The entire educator training course is based on the following steps: welcome, case study definition, leading to integrated thinking, research and deepening knowledge, practical application of knowledge gained, and bibliographic references Cardoso et al., 2021).

It is distance learning that allows the educational process to be carried out synchronously (through videoconferencing) and asynchronously (by arranging tasks and learning materials in different applications, taking into account the fact that education applicants will process it at a convenient time for themselves). It is distance learning technologies imply comprehensive use of problem-research methods and application of the acquired knowledge in collaborative or individual learning activities. This way of interaction contributes to the development of critical thinking, communication culture, teamwork skills, i.e., in this way the technologies of person-centered learning are effectively used (Tsekhmister, et.al., 2021b). As a result of such an approach to the implementation of the educational process, applicants form the ability to critically assess the information received, to argue their own opinion. However, in our opinion, distance learning is the

most effective for the implementation of practical tasks of andragogy. Adult education opens up a wide range of opportunities for self-realization (expansion and deepening of knowledge, development of abilities, advanced training) for each person. This approach to continuing adult education can be considered as the main vector of andragogy development in the XXI century.

Pedagogical innovation requires from the teacher a certain transformation of knowledge, recognition of the need for creative activity, and a new understanding of knowledge (Vasconcellos & Maciel, 2019, p. 747; Franco, Silva & Torisu, 2019, p. 698-715). Accordingly, in the innovative system of the pedagogical activity, the functions of the teacher himself change, who must act essentially as a researcher, who hypothesizes in determining the tasks, planning and critically evaluating the content of educational material. In general, reflection for the teacher provides more objective real knowledge about his or her own practice (Cardoso et al., 2021, p. 2610-2611). To overcome isolation and create a unified educational space, it is important to study the experience of foreign countries on the development of pedagogical sciences and the search for ways of improvement. Implementation of foreign experience, particularly European, is important for Ukraine, and some aspects are actively implemented in the practice of school education, vocational training (Demyanenko, 2021, p. 176-188). The main aspect here is not just gaining knowledge, acquiring skills and abilities in education applicants, and the formation of competencies for life in a multicultural and democratic society (Chasnikova, 2021, p. 125). That is why STEM education (Sociology Technology Engineering Mathematics), which covers natural sciences, technology, engineering (technical creativity), and mathematics, has gained wide popularity in recent years. This direction of education strengthens the connection between natural sciences and innovative technologies (Fernandes & Silva, 2020, p. 1669-1684). The introduction of STEM education allows higher education graduates to find jobs faster and fill relevant vacancies (NG & Park 2021, p. 193-204). Based on the U.S. experience, it should be taken into account that it is important not just to acquire a set of knowledge, but to be able to apply it in the changing conditions of social life (Denga, 2020, p. 38-44). The implementation of STEM education involves not only the disciplines that are part of STEM but also include disciplines in psychology and the social sciences Additionally, STEM education promotes a combination of theory and practice. The use of STEM not only in creative but also technical specialties promotes creativity, allows a better understanding of what to work on more and how to improve one's performance (Loudon, 2019, p.285). The introduction of STEM opens up new possibilities for the use of different types of activities during the educational process. Consistency, focus on learning content, active learning, and teamwork between educators and co-teachers are important in the implementation of the educational process (NG & Park, 2021, p.194; Dominick, Alves & Silva, 2020, p. 1629-1651). What is important is that students are constantly reflecting on the content of what they are learning and how to voice their reflections and thus move forward and improve their learning outcomes. Reflective thinking is an engine for unifying the learning process and increasing the social awareness of the participants in the educational process (Roa, De La Torre et al, 2021, p.154; Matusov & Pease-Alvarez, 2020). The applications of

appropriate programs in STEM education are based on beliefs, self-efficacy, content knowledge, pedagogical skills, teachers' technological skills, and curriculum requirements. Thus, preparing educators for STEM education in an integrated context by raising their awareness, expanding their technological and mathematical knowledge, and finally implementing innovative methods is carried out.

The effectiveness of the educational process is determined by monitoring the level of learning achievements and assessment of the results of the relevant tasks of education applicants. Here we should mention the peculiarities of the assessment process in educational institutions and analyze modern approaches to the system of assessment of applicants for education, in particular, the formative assessment during training and education. Under the influence of formative assessment develops self-regulation and intrinsic motivation in educational applicants (Vasconcellos & Maciel, 2019, p. 743-765).

Its primary purpose is to diagnose, correct, and predict student achievement, which occurs during the educational process (Denga, 2020, p. 40-41). Formative assessment focuses on assessing the process rather than the results and activates the learning activities of educational applicants (Kincal & Ozan, 2018, p.79; Chasnikova et al., 2021, p. 122-131). Therefore, assessment acts as a motivational component of the educational process, positively influencing the psycho-emotional state of the child. Skillfully using in the work with applicants for education modern methods of assessment, including verbal and visual, the teacher creates a favorable psycho-emotional atmosphere, a positive attitude to the process of learning, stimulates the development of the motivational component of learning. And it is important that assessment develops a thirst for knowledge and self-development, and not be a punishment for laziness or slow perception of educational material.

Features of an innovative educational system

An innovative educational system is characterized by the introduction of innovations, acting as the main factor of development, and also includes innovative activities and innovative processes. By its content, innovation systems can be divided into artificial, where educational processes are modeled based on forecasts, intentions, monitoring studies, and natural - the implementation of the educational process occurs based on consciously realized aspirations to achieve clearly defined educational goals (Tsekhmisteret. al., 2021a). The digital revolution has lasted more than 70 years and is actually a multifactorial transition from analog to the digital way of processing, transmitting, and storing information, which is accompanied by the rapid growth of hardware and software. How should education and the modern educational institution evolve? In the era of digitalization, it is important to create and actively use educational resources and various digital platforms that allow the use of interactive and multimedia content. An innovative system should have a modern educational and material base, including multimedia and computer facilities, quality Internet connection, i.e., numerous equipment to create a digital educational environment. However, now the world is moving into a post-digital space and the point is not that there is no digitalization, but that its

existence is not new and unusual, because it is just a fact that has happened (Capellini, Bello & Reis, 2020, p. 1685-1701). Thus, in today's society, the function of the co-educator of education itself is changing. For example, in higher education learning is focused on the student, they need to create a space for intellectual and creative development through learning through research (Matthews et al, 2021, p.11). The "pedagogy of dialogue" becomes relevant, where educators and co-educators are equal participants in a conversation of "critical dialogue in action," sharing experiences, cultural practices, goals, and attitudes (Matusov et al, 2020, p.5; Kincal; Ozan, 2018, p. 77-92). No longer innovative in content, but modern in implementation approach is the introduction of entrepreneurial approach in the educational process, the use of dual learning.

5. Conclusions

Considering the above-mentioned innovative vectors of pedagogical sciences development, we can conclude that pedagogy as a multidimensional science requires constant scientific search.

The focus of scientists' pedagogy as a complex science remains to require a clear formulation and solution of pedagogical problems, the implementation of reform ideas, taking into account the state of development of civilization. Innovative ways of development require an effective response to the needs of society, modernization of the means of implementation of the educational process and implementation of modern approaches to the education of the younger generation, the formation of a motivational component of all participants in the educational process.

The conducted research, based on the analysis of scientific sources, comparative aspects, and generalization of scientific-methodological foundations of the development of pedagogical thought, determination of the most priority further innovative ways of transformation of the complex of pedagogical sciences, does not exhaust all aspects of the designated problem. Among the further directions of scientific search can be noted: justification of features of implementation of the entrepreneurial approach in the system of higher education, dual training in professional training of specialists of different profiles, as well as more broadly to reveal the modern vectors of development of comparative pedagogy.

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Competitiveness of Ukrainian higher education in the world aspect against the background of Russian armed aggression

Competitividad de la educación superior ucraniana en el aspecto mundial en el contexto de la agresión armada rusa

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Abstract

The purpose of the article is to determine the competitiveness of higher education in Ukraine and the prospects for future development of university education against the background of the war with Russia. A number of theoretical methods were used to write the study, including analysis and synthesis, concretization method, prognostic method and SWOT analysis. In conclusions it is shown that the war of 2022 acquires distinct barbaric forms. However, higher education institutions in Ukrainian cities have not lost their potential. In addition, universities have retained their intellectual potential, which can be complemented by cooperation with Western institutions.

Keywords: Russian aggression, Ukraine, higher education, competitiveness, universities.

Resumen

El objetivo del artículo es determinar la competitividad de la enseñanza superior en Ucrania y las perspectivas de desarrollo futuro de la educación universitaria en el contexto de la guerra con Rusia. Para redactar el estudio se han utilizado varios métodos teóricos, como el de análisis y síntesis, el de concreción, el de pronóstico y el análisis DAFO. En las conclusiones se muestra que la guerra de 2022 adquiere distintas formas bárbaras. Sin embargo, las instituciones de educación superior de las ciudades de Ucrania no han perdido su potencial. Las universidades han conservado su potencial intelectual, que puede complementarse con la cooperación con instituciones occidentales.

Palabras clave: Agresión rusa, Ucrania, educación superior, competitividad, universidades.

1. Introduction

The development of higher education in Ukraine is a dynamic system, which, like in any other country, develops according to its own rules and peculiarities. An important distinction of its modern state is that it functions in the conditions of military operations and partial occupation of territories. This additionally makes this research problem relevant because the experience of such work is unique for Europe and the United States of the XXI century. The review is presented on the basis of a brief definition of the legal framework, through which it is possible to trace the formation of modern higher education in Ukraine. Among the tasks are to demonstrate the impact of the beginning of Russian aggression in 2014, the significance of the loss of Crimea, and the partial occupation of the Donetsk and Lugansk regions for the university system. The deployment of Russian aggression from February 2022 also remains a relevant issue. The Russian Federation's attack on Ukraine on February 24, 2022, opened a new page in the history of Central and Eastern Europe. At the same time, the Ukrainian side, as the most affected by direct

military action on its territory, will also experience “postponed” difficulties associated with the difficulties of establishing postwar economic, social, cultural, and regional life. So, among the expected problems to be studied in detail are those related to the functioning of higher education. A valuable criterion for determining the prospects of higher education in Ukraine is a study of its competitiveness. Let us note that there are different methods for its calculation. We define that the competitiveness of Ukrainian universities is determined by both quality and price dimensions of educational services and, to a great extent, depends on several factors: financial and economic, organizational and legal, scientific and technological, personnel, management, cultural and theological (if we are talking about higher religious educational institutions), demographic and political The competitiveness of higher education is determined only through research of objective data on the dynamics of internal processes. The main purpose of this article is to determine the competitiveness of higher education in Ukraine and the prospects for the future development of university education against the background of the unfolding war with Russia.

2. Theoretical Framework or Literature Review

The theoretical section of the paper is shaped by a systematic review of current literature and a synthesis of some of the researchers' experiences. Rajab (2018) compared the effectiveness of online learning with traditional forms through an analysis of the e-learning experience at Najran University. This educational institution has suspended traditional classes due to the ongoing war between Saudi Arabia, the Arab coalition, and Yemeni insurgent groups. The study determined the potential benefits of distance learning in crisis zones. The researcher's results demonstrated that there is no statistical or practical difference between distance learning or traditional learning, so using online technology can be used to teach in areas that have been devastated by wars.

Herbst, Aslund & Kramer (2022) summarized the effects of Russian aggression in Ukraine in 2014-2015, generally describing the social destruction suffered and noting the problems (including educational) faced by residents of the occupied. Mbah & Wasum (2022) examined the global consequences of Russian aggression on the entire world, not just Ukraine. Abassi (2022) also noted that the war goes far beyond regional confrontation and will have an undeniable impact on the entire world. Aladekomo (2022) analyzed the legal aspects of the Russian attack on Ukraine in February 2022.

Let us also note the works devoted to modern aspects of higher education competitiveness. Balan & Babenko (2020) investigated aspects of competitiveness formation and the management model of modern universities. Kwiek (2018) also resorted to similar problems. He drew attention to modern social and economic challenges that appear on the way of development of higher education (in the example of Poland).

The listed works are devoted to topical issues, but, we believe, do not cover the complexity of the situation in which higher education in Ukraine finds itself. Its competitiveness against the background of the unfolding Russian aggression has so far

remained without the attention of scholars, who have focused more on the social, economic, and legal side of the war. Although the above-mentioned researchers have considerable results and an established research methodology, the subject of the influence of Russian aggression on higher education in Ukraine has not been fully explored.

The methodological basis of the article is formed by the fundamental works of scientists who studied the development of higher education under the conditions of occupation. In particular, Hammond (2007) characterized the peculiarities of the functioning of universities in Palestine under conditions of war. Kretzmer & Ronen (2021) analyzed the situation of education in the occupied territories through a legal lens. Note that the scholars start their narrative from the time of World War I. Gordon (2022) analyzed the problem of the development of university education in Israel. This researcher notes that as early as the beginning of 1970, the Israeli authorities granted the Palestinians permission to establish institutions of higher education in the occupied territories. This should have normalized the negative situation in the then educational sphere. However, such decisions did not have a positive effect, since the universities established during the occupation quickly became places of political rather than educational interest. Consequently, we believe that the Palestinian experience serves as a valuable example for Ukraine. At the same time, Chankseliani et al. (2020) investigated the functional features of higher education in Georgia at different levels: local, national, and global. The experts paid special attention to the development of education in the Russian-occupied Georgian territories (Abkhazia and South Ossetia). They note that Russian aggression is actively celebrated in Georgian universities; in addition, students actively participate in activities that promote awareness of the Russian occupation of Abkhazia and South Ossetia.

3. Methodology

A number of theoretical methods were used to write the study, among which we will distinguish general scientific analysis, synthesis, induction, and deduction. Due to the use of the method of concretization the clear stages of development of the higher school in Ukraine were demonstrated, which allowed to determine the weak and strong sides of its functioning. The article applied the method of abstraction, which provides for ascending from the abstract to the concrete (Balan & Babenko, 2020). It was used in the discussion when taking into account the problems and prospects of higher education development against the background of the deployment of Russian aggression in Ukraine.

We focused separately on the use of empirical methods of collecting and interpreting information. For example, the difficulties in the functioning of Ukrainian universities are traced based on the use of the prognostic method. The SWOT-analysis was also applied as a supplement to the predictive method. SWOT-analysis is conceptually simple, it is one of the most popular models for determining the ability of an educational organization to function in its environment, as well as a basis for the competent formulation of

development strategies. It is a generalized basis for assessing the external environment and managing the internal environment of educational organizations. This method allows you to highlight the main problems as a result of a detailed analysis of individual components, and (optionally) place them by level of importance. The value of this analysis lies in the fact that it is a method for assessing a large amount of information, does not require additional financial and technical costs and resources, and promotes convenient formatting and perception of systematized analytical information.

4. Results and Discussion

By its structure, the higher school in Ukraine is rather conservative and changes slowly. After the emergence of independent Ukraine, the foundations of policy in the formation of higher education were laid in the Law of Ukraine “On Education”, adopted back in 1991. The main achievement of this regulatory act was that it abolished the communist Soviet (ideological) coercion in education, but the control over higher education institutions was still in the hands of state structures (Balan & Babenko, 2020). An important novelty of this legislation was that non-state institutions of higher education, i.e., those established on private initiative, were allowed to emerge. In addition, all universities (private and public) adopted the same requirements for functioning: obtaining licenses, passing accreditation of specialties and institutional accreditation of institutions, etc. (Ostapenko, & Timchyk, 2020). According to the law, three levels of educational qualifications that can be obtained in higher education were introduced: associate, bachelor, and specialist/master. Higher education institutions of categories I-II (colleges and colleges) became those in which junior specialists (partially bachelors) were trained. Bachelor's, Specialist/Master's degrees could be obtained in institutions of higher education of levels III-IV - universities, conservatories, institutes, etc. The opportunity for religious institutions of higher learning is an important advance because ancient church art, iconography, etc., took place only from a secular point of view. The possibility of opening institutions of theological education had a significant impact on the post-Soviet structure of the university system.

The adoption of the Constitution in 1996 established uncompromising new legal norms that regulated the field of education. Above all, it stated that the Constitution defined the principles of the rule of law and its norms had a direct effect. Article 53 established the right to receive free higher education - it was mainly the state higher education institutions, which could choose the best students for free education on a competitive basis, while private universities had the opportunity to decide on their own choice who should receive free education. It was not until 1996 that the Constitution of Ukraine established that the guarantee of the human right to education should be guaranteed exclusively by the laws of Ukraine, as well as the general principles of education.

Only in 2002, the Law of Ukraine “On Higher Education” was prepared and adopted, which is still in force with various amendments and additions (Ostapenko, & Timchyk, 2020). The law did not significantly change the already established form of higher education, did not introduce novelties in the definition of other types of higher education institutions, but clearly outlined the procedures for obtaining licenses and accreditation.

As a result, the number of institutions of higher education of III-IV levels of accreditation began to grow rapidly, as well as the total number of students. After the adoption of the law, the practice of granting licenses for the opening of new educational institutions and the expansion of old ones spread. As a result, back in 2013, there was a paradoxical situation when Ukrainian universities received licenses to train more than 2 million Ukrainian students, while the total number of school graduates was several times less. Probably this case further stopped the “extensive” development of higher education in Ukraine, and later initiated the principles of development based on the background of the competitiveness of universities.

The results of this process were embodied in the legislative decisions that continued Ukraine's integration into the Bologna System. In particular, some formal “vestiges” of the past (such as the “specialist” degree) were abolished, and universities received much more autonomous rights, so their management was able to improve (Puriy & Kuznetsova, 2020).

However, 2014 was a crisis year for the entire Ukrainian society. Russia's annexation of Crimea and the beginning of aggressive actions in eastern Ukraine led to the identification of deep problems in all spheres of public life. One of them was the unpreparedness of Ukrainian universities to the challenges of wartime. Budgetary programs were revised, and a formula was approved, according to which “funds moved by applicants,” meaning that universities actually began to compete for the best graduates to be assigned to their ranks. This, together with an increase in certain budget funding items, provided an opportunity to significantly strengthen the competitiveness of Ukrainian higher education institutions (Puriy & Kuznetsova, 2020). At the same time, the slowness of the higher education system led to a very slow transformation. Against the background of the unfolding military conflict in the Donbas in 2014-2021, the success of the Ukrainian higher education system (according to the ratings) was modest. The Ukrainian national system of higher education reacts to changes in educational processes due to Russian armed aggression. The Ukrainian national system of higher education is responding to changes in educational processes due to Russian armed aggression. Military crisis shocks have affected the state of the Ukrainian educational system and Ukrainian spirituality as a whole. Instability, political and social and economic were supplemented by spiritual difficulties. We believe that Ukrainian higher education today has the special task of demonstrating its difference from Russian in all manifestations of its existence.

Democratism and humanism are the main features of competitive Ukrainian education. While Russian education is built on the principles of totalitarianism, xenophobia, and medieval despotism.

The QS World University Rankings system was chosen to demonstrate the competitive advantages of the Ukrainian system of higher education. Thanks to their own system of calculations, experts identified 50 best and competitive higher education systems - QS Higher Education System Strength.

The methodology of formation of this list is based on 4 main factors:

1. The efficiency factor gives general impressions of any state's position in the overall ranking tables.
2. The Accessibility Factor aims to find out the opportunities for citizens of the country in question to enter top universities in all corners of the world
3. The “flagship factor” is also applied to determine the overall effectiveness of the system. That is, the effectiveness of the best university in the country is considered to be the merit of the entire educational system.
4. The economic factor is the reciprocal relationship between the state's monetary infusion into the system of training specialists and the result obtained.

According to the proposed counting system, the overall result and the determination of the respective place of the higher education system of different countries is influenced by the position of the best national universities (those educational institutions that are part of the rankings of the respective ranking systems) (Kwiek, 2018). This aspect of the work is determined by its own criteria and contains quite clear characteristics, which should also be emphasized:

- the overall vision of the academic community (in fact, the academic reputation of the institution (30%);
- stakeholders' vision and their impressions of the working and practical skills and abilities of the graduates (20%);
- the percentage of faculty and students (20%);
- number of faculty members with teaching or academic titles (10%);
- the number of scientific publications per teacher per year (10%);
- the number of citations of scientific publications (5%);
- the number and percentage of foreign professors (2,5%);
- the number of foreign students.

Analysis of Ukrainian indicators in this system showed that Ukraine ranked 45th in the QS Higher Education System Strength ranking in 2016. Then Ukraine, according to experts, was ahead of the Philippine, Egyptian, Estonian, Pakistani university systems, as well as the UAE. In 2018 the situation has changed slightly - in the mentioned rating system, which determines the competitiveness of Ukrainian higher education, the position of Ukraine has even strengthened somewhat. The Ukrainian system took 44th place, ahead of Belarus, Pakistan, Greece, Poland, Estonia, and the Philippines. It should be noted that 2018. - is the fourth year of Ukraine's confrontation with the Russian aggressor, which by that time had already announced its annexation of the Crimean Peninsula, and its subordinate puppet entities had occupied power in powerful industrial regions in eastern Ukraine. First and foremost, in terms of the purpose of our article, the loss of Simferopol, Sevastopol, Luhansk, and Donetsk - extremely influential university centers - has dealt a powerful blow to the system of higher education in Ukraine. Therefore, even in the face of tangible territorial, economic, and social losses, the Ukrainian system of

higher education has at least retained its retained position in competitiveness rankings, and some individual institutions of higher education have entered international lists of the best universities.

We should note that the preservation of the competitive potential of the Ukrainian system of higher education was facilitated by the dynamic activities of universities, military, and state authorities aimed at the evacuation of the staff and property (as far as it was realistic) of the seized universities, that is, to preserve the teaching staff and pedagogical base. In subsequent years, there was also an active propaganda campaign aimed at getting applicants from the occupied territories to transfer or enroll in Ukrainian higher education institutions. More than 5,000 people took advantage of this opportunity during 2016-2019 - not as many as expected, but initiative and motivated young people prevailed among them. In addition, since the beginning of the COVID-19 pandemic, the training has been conducted remotely, a method that has proven to be quite effective in maintaining a decent level of education in a war-torn environment (Rajab, 2018).

The state of affairs in 2022, however, is different from the situation in 2014. On the one hand, Ukrainian society is generally accustomed to the view of the threat or deployment of a full-fledged Russian attack in the East or South of Ukraine, which has been repeatedly stated on Russian TV channels from quite official persons (Aladekomo, 2022). On the other hand, the shock of the barbaric methods of warfare proposed by the Russians, the bombing and destruction of peaceful Ukrainian cities and populations-justifiably led to the emergence of repressed sentiments in society. More and more young people are interested in going abroad (Abassi, 2022). In addition, European universities, in their efforts to accommodate Ukrainians, offer an expanded selection of majors and training areas for which free or partially free tuition is announced (Mas-Verdu, Roig-Tierno, Nieto-Aleman, & Garcia-Alvarez-Coque, 2020). As hostilities continue, higher education in Ukraine will be hampered.

As of today, much of the territory is still outside the control of the Ukrainian government. Accordingly, the universities of the largest captured cities, Kherson and Mariupol, are outside the control of the ministerial system. Similarly, Starobelsk, where the university evacuated from Luhansk was operating, was seized. Out of control were quite a few institutions of I-II accreditation level located in the occupied territory. So far, it is known that military operations are ongoing and will continue, the results and methods of which will require further evaluation. It can also be stated that the process of education with reservations may begin in the powerful university centers of southern Ukraine. Perhaps it will begin in Odesa, Zaporizhzhia, and Dnipro, unlikely in Mykolaiv (Puriy & Kuznetsova, 2020). A tragedy for Ukraine was the barbaric destruction of Kharkiv and local universities, which requires time and considerable funds to rebuild. Higher schools in Chernihiv and Sumy, which also suffered material losses, suffered to a somewhat lesser extent. Against this background, the provision and financing of university centers is problematic, because the budget sequestration and its fair focus on military operations significantly limit the possibility of restoring scientific and educational centers. At the same time, we should

note that part of the financial assistance of European and U.S. partners will be directed by the Ukrainian government to meet the needs of pedagogical workers in general. In particular, the question was about restoring the full-fledged (as far as possible) work of universities.

We should also note that the situation does not look unpromising. Higher educational institutions in Kyiv, Dnieper, Cherkasy, Poltava, and western Ukrainian cities have not lost their potential. In the long term, proper handling of the distribution of financing will enable a rethinking of some aspects of university work and a refocusing on promising research areas. In addition, it should not be forgotten that universities have retained a powerful intellectual potential - the vast majority of teachers have not left the country out of a sense of patriotism and their own responsibility (also the departure of men of conscription age from Ukraine is limited) (Ostapenko, & Timchyk, 2020). Many students remain in Ukraine, which allows us to hope that they will remain competitive in the future.

We should also note the cultural component that distinguishes, for example, Ukrainian higher education from Russian higher education. The Russian Orthodox Church, led by Patriarch Kirill, promotes the educational and clerical ideology of the “Russian world,” which is alien to Ukrainian consciousness, education, and spirituality. Thus, Russian church-political ideology questions and criticizes Ukrainian education, culture, and art. Ukraine, on the state level, is building a strategy of absolute independence from the Russian aggressor.

The difference between Ukrainian and Russian cultures can be traced through culture and art. For example, Ukrainian icon painting, unlike Russian, absorbed the best features of the European Renaissance, Baroque, and Classicism, while Russian is frozen on the medieval model of the ancient “Byzantine canonical style”. Today Ukrainian art remains, unlike Russian art, competitive and interesting for Western European countries, because it has combined the aesthetic principles of the East and the West.

An important aspect is the establishment and deepening of cooperation with Western universities and government institutions. Some experience of joint activities since 2014 has been gained. Back in 2021, at the 23rd Ukraine-EU Summit, the Agreement on Ukraine's participation in the Horizon Europe Research and Innovation Framework Program and the European Atomic Energy Community Research and Training Program “Euratom" was officially signed. When all formal procedures were followed, scientists, researchers, and entrepreneurs from Ukraine were able to use support and grants to conduct joint research. During the time when Ukraine was among the associated members and actively participated in the projects of the previous Horizon 2020 framework program, grant support was received for more than 45 million euros (the seventh place overall among the associated countries) (European Commission, 2018). The vast majority of these grant funds were also raised for individual projects at institutions of higher education because their employees were actively involved in the competition for the grants. By the way, the meeting of this place in passing indicates that the competitiveness of Ukrainian scientists and university professors is at a fairly decent level. Note that the

representatives of the National Academy of Sciences of Ukraine, who participated in the Horizon 2020 projects, also work at universities in parallel, so they can also be referred to the general number.

So, in the discussion, we will try to summarize and determine the potential of competitiveness of Ukrainian higher education against the background of Russian aggression.

We believe that in order to take into account the position of the Ukrainian higher education system in the context of international competitiveness against the background of Russian aggression it is better to conduct a SWOT-analysis. This method will reveal the reserves for retention of competitive positions in the market of educational services and scientific research. The results are summarized in the Table.

Table 1.
SWOT-analysis of competitiveness prospects Ukrainian higher school

Negative aspects and consequences	Positive aspects and consequences
1. The low level of funding for higher education, which significantly reduces the motivation of scientific and teaching staff against the background of budget sequestration in the near future.	1. The preservation of a fairly strong intellectual potential among the scientific and pedagogical staff and from among students and potential students. Nevertheless, the vast majority of teachers, scientists, and applicants for higher education remained in Ukraine. As the figures analyzed above show, even in the face of confrontation in 2014-2022, higher education continued to function and be competitive.
2. Potential demographic crisis caused by the departure abroad of a considerable number of potential applicants. Social problems caused by macroeconomic processes in the Ukrainian economy may lead to a sharp drop in the living standards of the population, which may lead to the next negative step - the loss of the ability of the part of the population to obtain higher education (at least in Ukraine)	2. Participation in international grant programs and academic mobility programs. Maintaining active international cooperation will not allow us to lose touch with the scientific and educational potential of advanced countries, and will allow us to obtain additional funding, which is not forthcoming. Since motivated and experienced students and professors participate in grants and exchange programs, this will also be a bonus to the competitiveness of Ukrainian higher education.
3. The excessive bureaucratization and conservatism of administrators at the state	3. Establishing cooperation and interaction with potential employers, which will

level, limiting the development of higher education. Even in peacetime, the reform of university affairs did not move forward very quickly. There is a danger that the state apparatus will not be able to respond to the challenges in time.	contribute to a more effective transfer of knowledge
4. Military destruction and losses. As noted, many university centers have been destroyed or are now occupied. In addition, hostilities are ongoing and cannot be stopped at this stage.	4. A wide network of higher educational institutions, which opens up opportunities for evacuated students from other parts of Ukraine to receive an education or continue their studies. We should also note the experience gained since 2014, when, for example, it was possible to remove several universities to the controlled territory. This experience could be valuable in overcoming the consequences of the war and Russian military aggression in 2022.

Therefore, the sector of Ukrainian higher education is an important element of social development and at the same time reflects the situation in the country because it marks the objective influence of the political and economic situation. Undoubtedly, all this affects the competitiveness of universities in Ukraine against the background of Russian aggression (Mbah & Wasum, 2022). However, based on the above positive aspects of higher education institutions, we can state that a complete collapse at this stage is not expected, and the problems caused by the war can be solved, or eliminated with fewer consequences.

At the same time, we should note that it will be difficult to assess the competitiveness of the Ukrainian higher school based on ratings in the future. Although we are aware that at the current stage of rankings formation it is one of the most popular ways to assess.

International ranking systems' conclusions imply a weighted summative evaluation of different areas of university life, with particular emphasis on research and educational achievements (Kelly, 2021). At the same time, while improving, international methodologies of ranking lists began to take into account the teaching process and pedagogical activity, internationalization, and implementation (or at least availability) of regional and social programs. That is, rating list methodologies are changing over time, trying to take into account modern approaches to performance assessment. We believe that the orientation of the compilers of these lists on the study of the cooperation of the university environment with industrial or other private structures, self-analysis of curricula, questionnaires and surveys of students, and the like, are the advantages of such systems.

At the same time, we consider it necessary to focus on the following criteria. Among certain disadvantages of concluding ratings is the possibility of using unreliable data. In

the conditions of the Russian-Ukrainian war and insane information confrontation, there are likely to be cases of deliberate misinformation, hacking of websites, where there should be information about educational programs, distorted perception of their essence, etc. One should also take into account a rather high level of subjectivity in assigning “points” for the fulfillment of some or other rating requirements. It is no secret that many “adherents of the Russian world” can still influence decision-making through expert environments - not in favor of the Ukrainian side.

In general, it is quite ambiguous to compare and obtain an integral assessment. For example, with the physical destruction of the university buildings, the overall scientific and material base would significantly decrease, so that its assessment could also be negative. At the same time, the teaching staff is able to show results that in general can be comparable with their pre-war performance. So, on this criterion, the university's evaluation may be at the standard level. In fact, with a noticeable decline in the scientific and pedagogical working conditions, the achievements and demonstration of even the pre-war level in the evaluation should be taken into account positively. Therefore, in our opinion, when calculating the level of competitiveness of the Ukrainian higher school the use of an assessment made solely based on the ranking is insufficient. It is much more expedient to use a comprehensive approach, which will more objectively take into account the extreme conditions.

5. Conclusions

Thus, the competitiveness of higher education in Ukraine is an important element of the country's development, the preservation of its innovative and technological potential, and the way to solve economic, social, and cultural problems. As a result of Russian aggression, the university system in Ukraine suffered a powerful blow. True, such a blow first came in 2014, when Crimea was occupied and the war in Donbas began. However, the war of 2022 is taking expressively barbaric forms - primarily because of the actions of the Russian federation. Overall, however, the situation does not look unpromising. Higher education institutions in Kyiv, Dnipro, Cherkasy, Poltava, and western Ukrainian cities have not lost their potential. In the long term, proper handling of the distribution of financing will make it possible to rethink some aspects of the university's work and focus on promising research areas. In addition, we should not forget that the universities have retained a strong intellectual potential, which can be supplemented by cooperation with Western institutions, grant funds, and framework programs. All these aspects allow us to positively assess the future competitiveness of Ukrainian universities.

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Formation of professional skills of future physicians in the process of professional training

Formación de las competencias profesionales de los futuros médicos en el proceso de formación profesional

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Abstract

In the article are grounded and experimentally tested organizational-pedagogical conditions of the formation process of professionalism of future medics. The aim is to

show the ways of educational environment modernization by adapting them to modern requirements for professional activity. The methods included an exeperiment – the updating of preparation of the future medical workers by the introduction of innovative educational technologies and interactive methods of training. The results showed an improvement of pedagogical skill of teachers of medical institutions using scientific and methodical work; activation of formation of practical abilities and skills of medical workers through simulation modeling in quasi-professional activity.

Keywords: professional excellence, future physicians, professional training, means of scientific and methodological work, organizational and pedagogical conditions.

Resumen

En el artículo se fundamentan y prueban experimentalmente las condiciones organizativas-pedagógicas del proceso de formación del profesionalismo de los futuros médicos. Los métodos incluyeron un experimento: la actualización de la preparación de los futuros trabajadores médicos mediante la introducción de tecnologías educativas innovadoras y métodos interactivos de capacitación. Los resultados mostraron una mejora de la habilidad pedagógica de los docentes de las instituciones médicas mediante el trabajo científico y metódico; activación de la formación de habilidades prácticas y habilidades de los trabajadores médicos a través de modelos de simulación en la actividad cuasi-profesional.

Palabras clave: excelencia profesional, futuros médicos, formación profesional, medios de trabajo científico y metodológico, condiciones organizativas y pedagógicas.

1. Introduction

The formation of professional competence in the context of the psychology of personal development of the future doctor requires substantiation of the integrated model and improvement of the content, structure, forms and methods of professional training of medical staff to perform medical activities, determination of psychological and pedagogical conditions for increasing professional competence. Higher professional education changes accordingly to the requirements of modern society and the labor market, which need the most adapted, efficient, competitive specialists. The problem formation of the specialist's professional competence in any field is in the field of view of many disciplines (Lugovyi, 2009, p.1).

The result of assimilation of the educational material depends on the effectiveness of the interaction of the participants in the pedagogical process, the ultimate goal of which is the acquisition of competencies that, in the independent professional activity of a specialist, ensure further self-improvement. The result depends on the pedagogical technology, but it is clear that the choice of priority pedagogical technology depends on the field of education. This especially applies to medical education, as it is characterized by the

specifics of teaching, which is a combination of theoretical and practical components of the educational process (Zakusylova, 2016, p. 407-410).

As noted in the Law of Ukraine “Fundamentals of Health Care Legislation”, the professional training of future medics should be focused not only on the formation of medical competence but also the readiness of graduates of medical institutions to participate in ensuring the harmonious development of physical and spiritual strength, high work capacity. The long-term active life of citizens, elimination of factors harmful to their health.

As the student begins with the teacher, the medical worker begins with the teacher-mentor, especially in clinical disciplines. The success of productive professional activity of future medical workers largely depends on the teacher's personality and skills. Finding ways to improve the pedagogical skills of teachers of medical institutions is an urgent problem because a teacher-innovator is able to ensure the effectiveness and efficiency of the educational professionally-oriented process (Martyniuk, O. (2019). Nowadays in the world, the profession of a medical worker, in particular a physician, acquires new heights, new development.

Today, unfortunately, we have to state that many teachers of medical education institutions are focused mainly on the traditional approach, but now we also need a different attitude towards the educational process. It is an organic combination of classical and innovative methods, introduction of innovative forms and methods of teaching, new educational and information technologies to attract students' independence, initiative, activity in learning. Before such skills can be discovered, taught, and instilled in students, it is necessary to develop them in the teachers themselves, including those who work in medical institutions.

2. Literature review

Modern society considers a specialist not only as a person who possesses knowledge, abilities and skills in the professional sphere, but also as a person who is able to act effectively in complex, non-standard situations, make decisions independently, develop creatively and improve oneself, practice a tolerant attitude towards others, know how to communicate with people. These and others are professionally important properties and personal qualities determine the specialist's professional competence. According to (Tsekhmister, et al., 2021c), professional competence is the possession of a system of knowledge, abilities and skills, sufficient for the successful solution of the range of work tasks that corresponds to the current and expected functional duties in the near future employee. Taking into account the specifics of physician’s professional activity, his professional competence is based on key skills, namely: professional, communicative, research and scientific.

Currently, the quality of training of a graduate of a medical university depends on many factors. These are the professionalism of teachers, the conditions and security of the

educational process, the composition of elements in the educational process, the motivation of learning, modern learning technologies, knowledge control systems, the motivation of pedagogical work, the organization of educational and research work of intern doctors as an integral part educational process, performance of individual tasks and scientific projects with elements of research, participation in the modernization of the educational and laboratory base medical university, methodological support educational process. In this context Griffith University (2019) could be taken for an example, one created there the first human health department based on innovative curricula to improve interdisciplinary teaching and research in Australia. Unfortunately, not all the countries have this possibility. (Jibladze, 2017), argues that the development of institutional transformation has been suspended and improvements in higher education in post-revolutionary Georgia are lacking. Koshy (2018) briefly states student participation in higher education in Australia from 2012-2017 to create the National Center for Student Equity in Higher Education. Kottmann et al., (2016) in their writings addresses the challenges of creating a culture to enhance educational excellence. The Australian Government Department of Health in the WSIPP CBA projects... (2018), (Wang & Sun, 2018) conducted a cost-benefit analysis of models of care for health professionals (qualitative and quantitative dimensions of health professional education) (p. 196-200). Kremen (2009) highlights the President of the Academy of Pedagogical Sciences of Ukraine's own Introductory Statement on the implementation of the European experience of the competence approach in higher education in Ukraine. Gorb (2018) proposes the competence approach in higher education according to the standards and recommendations to ensure its quality in the European Higher Education Area. Martyniuk (2019) analyzes the European concept of a competency-based approach in higher education and the problems of implementation in Ukraine. Mckenna et al., (2019) analyzes the field of practice and workforce challenges faced by the Australian health workforce from a quality change perspective (p. 80-85). Mitchell (2019) argues that hundreds of Washington State health care workers are leaving for the UK to find jobs under the Department of Health agreement. The National Council of State Boards of Nursing develops NCLEX final exams for them to highlight the objectivity of their knowledge (Heckman, Holland, Makino, Pinto & Rosales-Rueda, (2017). Specific fact sheets are used to use common names and nomenclatures in the competency aspect of physician competency. Scherer, Herrick, & Leeseberg Stamler (2019) have experience teaching immigrant graduates of an entry-level baccalaureate nursing program about hermeneutic phenomenological research in nursing practice (p. 185-191). Semenikhina et. al, (2020) created open-ended digital educational resources in the area of innovative technology in the aspect of quantitative analysis and modes of learning to enhance nursing skills. A list of IQ skills according to the nursing reference committee standard is presented. The Curtin University undergraduate nursing education industry curriculum guide is also created (The good universities guide, 2019). A list of educational and professional settings at the University of Queensland for prospective pre-med baccalaureate level applicants and students is proposed Viznyuk (2015) offers the newest approach in the professional organization of the mentor teacher's personality in a

sociological context regarding the problem and prospects of forming a national humanities-technical elite (Heckman, Holland, Makino, Pinto & Rosales-Rueda, (2017).

In this context the goal of the article is to propose possible tools of professional skills formation of future medics in the process of professional training. The main tasks of the study are to develop scientific and methodological support and a model for the formation of professionalism of future medics in the process of professional training and experimentally verify their effectiveness; to formulate a hypothesis of the research.

One should mention that the level of modern professional training does not contribute to the development of professional mastery within the framework of classical approaches, which does not exhaust all aspects of the problem posed and requires special additional techniques (Gorb, V. G. (2018). Thus, it is necessary to create methodological support for the exchange of best pedagogical practices of medical HEI teachers; to conduct thematic pedagogical councils on the development and enrichment of the skills of teachers, including - clinicians; to implement empowerment policies; to develop international cooperation on the implementation of innovative technologies to improve the pedagogical skills of clinical teachers; to create interactive networks, ensure the academic mobility of students.

3. Methods

A scientific and methodological seminar for the teachers at the medical university, a questionnaire survey was conducted, which showed positive feedback of mentor teachers, who expressed their opinion on the effectiveness of the implementation of innovative pedagogical technologies in the practice of professional medical training.

The plan and features of the organization of the pedagogical experiment on the formation of professionalism of future medical workers are also reflected; a comparative analysis of the results of the control and the control stages of the pedagogical experiment regarding the effectiveness of the proposed model, Tsekhmister et.al. (2021a) certain organizational and pedagogical conditions and scientific and methodological support of the formation of professionalism of future medics in the process of professional training is carried out.

The pedagogical experiment was carried out based on D.K. Zabolotny Vinnytsia Medical College and Vinnytsia Pirogov National Medical University. Experimental-experimental work continued throughout 2019-2021 specialty 223 “Nursing” (until April 29, 2019 - knowledge area 1201 “Medicine” specialty 6.120101 “Nursing”, 222 “Medical Psychology”) and 57 teachers. The essence of the experiment was a special organization of the educational process by the developed organizational and pedagogical conditions of the formation of professionalism of future medical workers. The study was conducted in the natural conditions of the educational process of institutions with the provision of general conditions of participation in the experiment: the same time and duration of the training, the same measuring materials, allowing to diagnose the level of formation of

professionalism of future health workers due to the introduction of formative activities in the process of pedagogical experiment.

At the ascertaining stage of the pedagogical experiment to find out the degree of knowledge of professionalism, testing was carried out according to the methodology determining the life values of medical professionals. To find out the level of formation of professionalism components of future employees the following trainings were conducted:

1) development of clinical and creative thinking (exercises “Clinical Situations”, “Associations”, “Causes and Consequences”);
2) teamwork (student projects, presentations, discussions, consultations);
3) creative problem solving (exercises “Positive Predictions,” “Healing with an Empathic Attitude”);
4) creative components of nursing professionalism (exercises “Dialogue”, “Make the Right Decision”). The main means of assessing the formation of the components of professionalism was to determine the level of students' success in mastering the content of professionally oriented disciplines.

To measure the indicators of motivational-value component of professionalism of future medical workers the diagnostics of motivation of professional activity (methodology of K. Zamfir in modification of A. Rean), (Wang, 2022) and motivation of success and avoidance of failures (methodology of T. Ehlers) were conducted. For the formation of this component were directed trainings on the development of professional speech; dispute “Medical nurse: profession or vocation?”; conference “Life under the sign of mercy” (dedicated to Sister of Mercy F. Nightingale); round table “To be happy with the happiness of others” (dedicated to the professional feat of doctor N. I. Pirogov).

To measure the indicators of cognitive-professional component of professionalism of future medical workers a questionnaire to determine the types of thinking and level of creativity (method of J. Bruner adapted by us) and diagnostics of self-development needs realization (method of E. Rogov) were applied. For the formation of cognitive-professional component of professionalism of future medical workers, the following was introduced: special course “Fundamentals of professionalism of future medical specialist”; innovative educational technologies (formation of clinical thinking, creation of success situation, medical professional speech); interactive, situational, research, heuristic, diagnostic, project-based teaching methods; method of clinical scenarios, etc.

To measure the indicators of operational and activity component of professionalism of future medics we carried out diagnostics of strategy in a conflict situation (K. Thomas methodology), (Thomas, Ellis, Konrad, Holzer, & Morrissey, 2009), test on revealing the level of communicability of medics (L. Svitich methodology, modified by us), (Svitich, Smirnova, Shiriaeva, & Shkondin, 2016), test “Assessment of communicative and organizational abilities” (B. Fedoryshyn methodology), (Kozyr, Fedoryshyn, Khoruzha, Chyncheva, & Gusachenko, 2021).

For the formation of operational-activity component of professionalism of future medical workers was aimed at the implementation of: special course “Mastery and Karpov professional inspiration of medics”; simulation modeling in practical classes using training moulages; quasi-professional activity; patient care and performance of pre-hospital procedures and manipulations in the conditions of the hospital in medical treatment facilities; coaching based on medical institutions; practical seminars: “Mastery of Medical Communication”, “Professional Ethics and Nursing Deontology”. The results of medical professionalism competition among students of graduate groups of “Nursing” specialty (on nursing in therapy and basics of nursing) “Best in Specialty” - on assessment of practical skills of future physicians were taken into account.

Measurement of indicators of performance-reflexive component of professionalism of future medical workers was carried out according to the method of diagnostics of personality reflexivity (author: A. Karpov) (Karpov, 2016) and according to the method of L. Stoliarenko (adapted by us) (Stoliarenko, & Stoliarenko, 2019), self-assessment of future medical workers. For the formation of performance-reflexive component of professionalism competitions of pre-hospital skill; filling by future doctors of the diary of personal and professional growth; debates, discussions, councils, master-classes.

4. Results

The model of formation of future medics' professionalism in the process of professional training includes four stages (motivational-adaptation, educational-formative, organizational-active, professional-directed), organizational-pedagogical conditions, and scientific-methodical support of the studied process (educational technologies, methods and forms of educational activities and extracurricular work), components, criteria, levels of formation of future medics' professionalism, crossing out the pedagogical conditions of development of future specialists' professionalism formation as a result of the implementation of formative activities in the process of the pedagogical experiment (organizational-pedagogical condition). The model outlines: scientific approaches (competency-based, systemic, culturological, activity-based, axiological, personality-oriented, areological) and principles (humanism, interdisciplinary integration, visualization, individualization, practical orientation) of forming professionalism of future medical workers.

Seminar topics “Pedagogical technologies of formation of professionalism bases of future medical workers”: “Pedagogical technology as a content technique for realization of the modern educational process”; “Technological approach to the formation of professionalism of future medical workers: theory and practice”; “Features of introduction in the educational process of the medical institution of new pedagogical technologies, active forms and methods of teaching”; “Preliminary design of educational process with the help of pedagogical”.

After the scientific and methodological seminar for the teachers at the medical university, a questionnaire survey was conducted, which showed positive feedback of mentor

teachers, who expressed their opinion on the effectiveness of the implementation of innovative pedagogical technologies in the practice of professional medical training.

The plan and features of the organization of the pedagogical experiment on the formation of professionalism of future medical workers are also reflected; a comparative analysis of the results of the control and the control stages of the pedagogical experiment regarding the effectiveness of the proposed model, Tsekhmister et.al. (2021a) certain organizational and pedagogical conditions and scientific and methodological support of the formation of professionalism of future medics in the process of professional training is carried out.

The positive dynamics in determining the levels of formation of professionalism of future medics due to the introduction of formative activities in the process of the pedagogical experiment was established (Table 1, Fig. 1).

Table 1
Results of the formation of professionalism of future physicians.

Levels	**Stages of the pedagogical experiment**			
1	2		3	
	Contesting stage		Forming stage	
	EG (persons; %)	CG (persons; %)	EG (persons; %)	CG (persons; %)
Low	47 (34,5)	48 (38,8)	6 (4,4)	13 (9,4)
Middle	62 (45,6)	63 (45,7)	40 (29,4)	66 (47,8)
Sufficient	19 (14,0)	18 (13,0)	63 (46,3)	43 (31,2)
High	8 (5,9)	9 (6,5)	27 (19,9)	16 (11,6)
Total	136 (100,0)	138 (100,0)	136 (100,0)	138 (100,0)

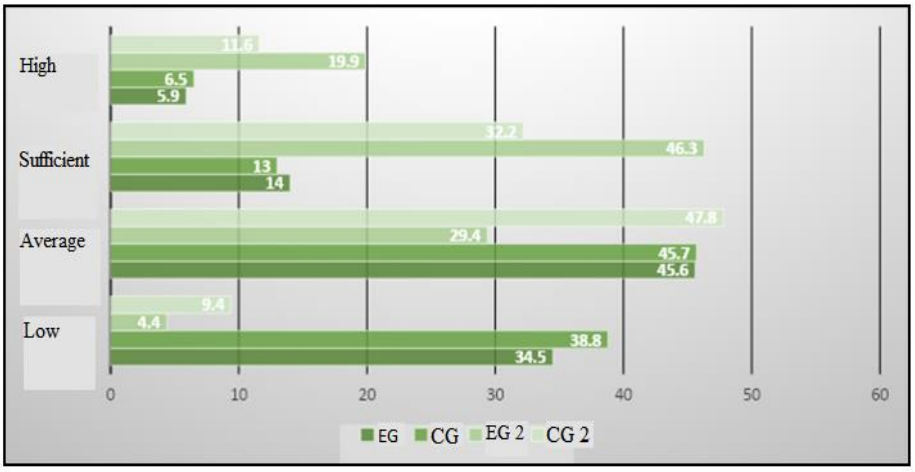

Fig. 1. The results of the implementation of formative activities in the course of the pedagogical experiment

Thus, the use of diagnostic complex confirmed that as a result of the pedagogical experiment there were quantitative changes in the indicators reflecting significant qualitative changes in the consciousness and behavior of future nurses, which testified to significant positive dynamics in the formation of their professionalism and readiness for professional activity in the field of medicine (Tsekhmister et al., 2021b). This was statistically confirmed by the quantitative indicators of the experimental groups: the number of future nurses with a high level of professionalism formation increased from 5.9% to 19.9% (the increase was 14.0%); the index of sufficient level of professionalism formation of future teachers increased by 32.3% (from 14% to 46.3%); the number of students with a low level of professionalism formation decreased by 30.1% (from 34.5% to 4.4%). The rates of changes in the corresponding indicators in the control groups are much lower, which indicates the effectiveness of the formative activities.

The quantitative indexes of the experimental groups became the statistical confirmation: the number of the future medical workers with a high level of formation of professionalism increased from 5,9% to 19,9% (the increase made 14,0%); the index of sufficient level of formation of professionalism of the future teachers increased by 32,3% (from 14% to 46,3%); the number of students with a low level of formation of professionalism decreased by 30,1% (from 34,5% to 4,4%). The rates of changes in the corresponding indicators in the control groups are much lower, which indicates the effectiveness of the formative activities. Comparison of the EG and CG results using statistical hypothesis testing methods (Pearson and Kolmogorov-Smirnov), (Jantschi, & Bolboaca, 2009), allowed us to establish significant differences between them at the formative stage of the experiment, which is due to the provision of organizational and pedagogical conditions.

It is proved that the increase of efficiency of the formation of professionalism of future medics in the process of professional training is promoted by organizational and pedagogical conditions: modernization of educational environment by adapting it to modern requirements for professional activity of medical workers according to world standards; updating the training of future medics by implementing innovative educational technologies and interactive teaching methods; improvement of pedagogical skills of pre-service teachers. The model of future nurses' professionalism formation in the process of professional training, which includes the following stages: motivational-adaptational, educational-formative, organizational-active, professionally directed, has been developed.

Consequently, the objectives of the study have been achieved, and the expected results of the pedagogical experiment confirmed the validity of the hypothesis and give grounds for the formulation of general conclusions.

5. Discussion

The current state of professional training of future medical workers in Ukraine, European states, the United States, and Canada determines the prospects for solving the problem of forming professionalism of future medical workers. Professional mastery, according to

Viznyuk (2015), is a good command of the basics of the profession, the successful application of techniques known in science and practice. Mastery means a teacher's good knowledge of his or her subject matter, achieving consistently high results in learning, mainly in the knowledge of education applicants. Every teacher can become a master of his or her profession if he or she wants to and persists.

Since the educational process is a two-way process, close cooperation and friendly relations between students and faculty is a prerequisite for the success and quality of the educational process. Very relevant in this context is Viznyuk's (2015) opinion that the subject-subject relationship between a teacher and a student provides the need for a special “technology of touching” the student's personality and gives the pedagogical process the features that unite pedagogy and art. One agrees that the teacher's code of professional ethics reflects ethical standards and values, ensures stability and quality of the educational process. Ethical standards in the education system are impossible without the rule of law, democratic procedures, and standards, which should certainly be respected and reflected in the International Code. The main objective of the Code of Professional Ethics is to promote and maintain high ethical standards of professional activity, conduct, and relations in the academic community. It defines the principles of activity, standards of professional conduct, and business ethics of a teacher in his relations with his colleagues, students, and governing bodies of an educational establishment.

The pedagogical excellence of the teacher should be manifested constantly: during classes (both lectures and practical, seminar, laboratory) and in the process of extracurricular work (Androsovych, Rudyk, Melnyk, Kovalova, & Yakymova, 2021). The teacher by his own example should show the example of compliance with the moral code (Elene, 2017, p. 7-27).

The integral characteristic of professional activity of any representative of scientific and pedagogical staff of medical universities is that both are called to fulfill the social order of the state for training a highly educated, comprehensively developed, qualified, competitive medical worker by normative industry documents: programs and educational and qualification features (Zakusylova, 2016).

However, it should be noted that in recent years there has been a change in society's perception of morality, a loss of capacity for emotional empathy, a “mechanistic” attitude toward patients. To make sure of this, you need to visit any state outpatient clinic or hospital, at least in most of them you can observe phenomena of low emotional sympathy and other phenomena. If for medical workers with a considerable period of work it can be explained by “burnout” syndrome or disappointment in social guarantees of the state, then for young specialists, who have just started their work, the roots of such behavior should be looked for in the system of professional medical education.

Despite the development of the scientific-theoretical basis of professional education of future specialists in the specialty “Nursing”, the industry standards still do not pay enough attention to the formation of professionalism of future medical workers. Today, the professional functions of medical professionals are somewhat expanding, which requires new approaches to their professional training.

The reform of the health care system in Ukraine, the transition to the principles of primary health care to the population and budget-insurance medicine, the establishment of market relations, the development of scientific and professional relations with other states, require the improvement of the existing system of training medical workers at the level of world standards. The requirements for the quality of specialists' training increase, prompting the improvement of teaching methods and the technical support of visibility.

In a number of well-known medical educational institutions of Ukraine in Vinnytsia Medical College. The number of famous medical educational institutions in Ukraine. The creative work of all the members of the teaching staff and auxiliary personnel as well as historical traditions allowed to create a good educational and material and scientific base for training high-quality specialists for practical medicine. During the 100 years of the educational institutions' existence, the managerial staff and teaching staff changed, but they tried to improve conditions for training, development of each personality in getting the most humane medical profession for thousands of students and modern graduates, to adapt them to new requirements of modern post-modern society.

Separate attention to the formation of the listed scientific achievements should be paid, in our opinion, at the third educational-scientific level of higher education, which is characterized by a combination of educational and research work in the training process. Scientific work at this stage is a subject of activity and requires new approaches to its organization. Thus, it is important to familiarize graduate students with the basics of working with Google Scholar, the international multidisciplinary abstracting platform Web of Science, Mendeley program, GenBank database, the world archive of nucleic acid sequences Protein Data Bank, electronic search system PubMed, database. The need to use the above resources is due to the need to find information to prepare for practical exercises, work on individual tasks. Awareness of the importance of using these resources in training is transformed into a sustainable motivation, and then conviction through their use for their own scientific search.

6. Conclusions

The professionalism of medical professionals should be understood as an integrative attribute that combines a high level of professional competence and technique of pre-hospital procedures and manipulations; culture of communication, responsibility, reliability, tolerance, empathy; the ability to navigate and perceive decisions in extreme clinical situations.

The criteria of the formation of the components of medical professionalism have been determined: motivational-valuable (self-motivation of professionally-oriented learning activities; formation of internal motives for achieving success in future nursing activities; availability of a system of vital and professional values of a medical worker); cognitive-professional (formed a system of theoretical and technological knowledge of nursing; knowledge of treatment methods and the role of medical workers in conducting them; willingness to optimize

Thus, the application of diagnostic complex confirmed that as a result of the pedagogical experiment there were quantitative changes in the indicators reflecting significant qualitative transformations in the consciousness and behavior of future medical workers, which testified to a significant positive dynamic of the formation of their professionalism and readiness for professional activity in the field of medicine.

Thus, the obtained results confirm the hypothesis of the study, however, it does not exhaust all aspects of the problem. The subject of further scientific research may be the theoretical and methodological foundations of pedagogical training of clinical teachers in medical colleges and institutions of higher education.

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Soft Skills formation in professional-oriented foreign language education at higher education institutions

Formación de habilidades blandas en la educación de lenguas extranjeras con orientación profesional en instituciones de educación superior

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Abstract

The article aims to analyze the constituent characteristics of soft skills and evaluate students' existing skills and their readiness to receive professionally-oriented foreign language training. General scientific methods of cognition are used for the study, including analysis of foreign investigations, periodicals, and surveys conducted by experts

and scientists. During the study, the requirements of employers to the personnel for the qualities of soft skills in students are determined. The results show that in foreign language teaching, insufficient attention is paid to the education of these qualities. The study results are of great importance for the higher education teachers forming methodological developments in fostering these soft skills among students.

Keywords: soft skills, flexible skills, social skills, quality of higher education, competence, employability.

Resumen

El artículo tiene como objetivo analizar las características constitutivas de las habilidades blandas y evaluar las habilidades existentes de los estudiantes y su preparación para recibir formación en idiomas extranjeros con orientación profesional. Para el estudio se utilizan métodos científicos generales de cognición, incluido el análisis de investigaciones extranjeras, publicaciones periódicas y encuestas realizadas por expertos y científicos. Durante el estudio se determinan los requerimientos de los empleadores al personal por las cualidades de soft skills en los estudiantes. Los resultados muestran que en la enseñanza de lenguas extranjeras no se presta suficiente atención a la educación de estas cualidades. Los resultados del estudio son de gran importancia para los docentes de educación superior que forman desarrollos metodológicos en el fomento de estas habilidades blandas entre los estudiantes.

Palabras clave: habilidades blandas, habilidades flexibles, habilidades sociales, calidad de la educación superior, competencia, empleabilidad.

1. Introduction

Many foreign and domestic higher education institutions practice foreign language learning during professionally-oriented education that enables students to successfully master and practice soft skills (British Council, 2021), (Glazunova, Kuzminska, Voloshyna, Sayapina & Korolchuk, 2017).

In the context of educational internationalization and globalization, soft skills are the main factor for successful employment, academic activities, and work.

The purpose of learning a foreign language during career-oriented learning is to master the foreign language and the basics of oral and written communication to apply it in informational and communicative activities. Also, professionally-oriented foreign language education is aimed at mastering oral and written communication to acquire professional and general cultural competencies.

To date, the educational level of students at various grades cannot be called satisfactory. The reason is that in the learning process, teachers emphasize grammar study, while the

other skills are not developed. A new approach to the educational process for specialists is needed to solve this problem. It is especially true for non-linguistic students studying at economic, technical, and other faculties, who need to negotiate, analyze data and generate reports for foreign companies. To develop knowledge of foreign language grammar and, at the same time, communicative abilities, it is necessary to create effective methods and ways of organizing the learning process (Khiminytsia & Martyniuk, 2020).

The development of soft skills competencies is quite a hot topic that many specialists discuss: teachers of foreign universities, HR managers, and management consultants. They share their suggestions in personal blogs and on the websites of educational institutions (British Council, 2021). As a result, not only theoretical pedagogical bases are being actively developed, but also practical ones, which are based on the successful experience gained during the study of English in different universities of the world.

However, it should be noted that there are not enough practical solutions for developing soft skills. We can find some theoretical and practical teaching methodology suggestions in the articles and publications of Z. Esmurzaeva, O. Novikova, S. Shylova and others. But currently, there is not enough research, as it does not allow getting a complete understanding of the nature and specificity of soft skills and how they can affect the educational process (Esmurzaeva & Novykova, 2019), (Shylova, 2017).

2. Literature review

The term "soft skills" was first used in scientific research by American and German management specialists. It appeared in their works in the 1990s, and a little later, it began to be used in business and education (Scaffidi, 2018).

Researchers interpret the term "soft skills" in different ways. However, the definition offered by K.A. Koval, K.I. Perez Maya, I. Yasna, etc is the most complete. According to it, "soft skills" is a successful interaction with the environment due to acquiring special or universal competencies. As a result, their owner can work in a team, think critically, solve complex problems, make quick decisions, etc. (Drozdova & Dubinina, 2020), (Guerra-Báez, 2021).

The development of "soft skills" competencies is essential for future employment and specialists' career growth. This opinion is expressed by K. Koval, S. Nahod and I. Garbuziuk. Consequently, the interest in this topic is constantly growing, confirmed by the scientific works of T. Litvin, A. Kravets, A. Kurakin, A. Bezus, etc. (Tymoschuk, 2021).

To date, one of the topical issues is the development of "soft skills." In modern science, the definition is defined as a set of professional and non-professional talents required for a specialist to work successfully and increase productivity. A soft skills owner must be communicative, competent, be able to work with people and distribute his time rationally. Also, he must have leadership qualities. It should be noted that each researcher defines the term "soft skills" based on their field of work. However, the same qualities that

employees with soft skills should have in different spheres indicate the universality of this concept (Tilikina, 2020).

According to A. Ivonina, O. Chulanova, & Yu. Davletshyna, soft skills are a set of competencies necessary for interaction between people: negotiation skills, time management, leadership, and the ability to persuade (Ivonina, Chulanova & Davletshyna, 2017).

The necessity of all these competencies for the successful work of a future specialist is confirmed by O. Taptygina He gives them the ability to defend opinions and ideas and coordinate their actions with others. Thus, he focuses on the emotional qualities necessary for interaction with people (Taptygina, 2018).

There is an opinion that the term "soft skills" is used to describe Emotional Intelligence Quotient (EQ) - the ability to control and manage one's emotions, being aware of them and feeling them. It should be noted that having soft skills helps in employment. They effectively complement the professional qualities of the job seeker (Berkovich, Kofanova & Tikhonova, 2018). V. Davydova confirms the fact that employers value soft skills. By this concept, she means the person's abilities acquired from life experience and training (Davydova, 2021). Virtually every definition of soft skills includes a communicative component for learning a foreign language (Kurinna, 2019).

In order to implement the classification of "soft skills" for the Single European Economic Space, a number of documents were adopted by the EU countries. Consultations on investing in improving and enhancing these skills have also been held. In 2018, EU member states adopted 11 directives to develop soft skills for European university students. Entirely new teaching methods have been developed for their implementation. A significant achievement in soft skills development was the adoption of the European Skills, Competences, Qualifications, and Occupations (ESCO) declaration, which offers their classification. It includes 1384 skills that are relevant to the modern labor market. Most of them are related to creativity, communication, and effective thinking.

According to some researchers, the phenomenon of soft skills lies in the difficulty of achieving and modifying them, which is confirmed by trends in education and the labor market in many countries - Australia, North America, China, and Malaysia, etc.

This phenomenon has been studied by leading research centers in the United States. As a result of the study of this phenomenon, scientists have identified the main types of soft skills:

1. Social (ability to communicate with people, empathy, concentration, cultural and multicultural competence).
2. Mental (creativity, quick problem solving, interdisciplinary thinking).
3. Organizational (ability to work in a team, presentation skills).

4. Personal (responsibility, self-confidence, flexibility, emotional stability, composure) (Business Soft Skills durch Fremdsprachen, 2020).

In the process of learning a foreign language, the most valuable skills will be soft skills 4C: Critical Thinking, Critical Thinking, Collaboration, and Communication. Several effective methods allow integration into the process of foreign language learning. One of the most effective is the communicative method. In order to develop communicative skills, which means to form the student's speech activity according to the situation, they must think independently and solve the set tasks. For this purpose, it is recommended to conduct research, write reports, and projects, organize public speeches using discussions, debates, and various verbal means of communication. The development of communicative skills is facilitated by the use of various verbal communication forms. They may include negotiations, interviews, case studies, etc. The teacher's interaction with the student is important in developing "soft skills." It has undergone severe changes in recent years. Today traditional forms of interaction are not widespread, which cannot be said about e-learning, m-learning, social learning, and game development.

The forms of interaction between teachers and students are chosen depending on the trends in education. Such trends include:

- Knowledge creation instead of knowledge transfer;
- Teacher-student interaction, collaboration, and teamwork instead of the traditional teacher-student knowledge transfer model;
- Cross-functional learning instead of narrow specialization learning;
- The use of different learning modes. Rotating classroom instruction, distance learning, practicum, and simulation is also necessary. The use of all these forms will contribute to the consolidation of professional competencies and soft skills.

Within a single year, the proportion of new skills that are produced around the world increases by 27%. That's the data from a study by the World Economic Forum. Automation, which has led to the loss of millions of jobs, is contributing to this. People who have lost their jobs are forced to retrain. It is the only way they can stay competitive in the labor market (World Economic Forum, 2020). Due to this situation, new educational trends are developing, the strategic goals of education are changing, and there is a transition to innovative learning methods.

According to World Economic Forum statistics, the most important skills in 2022 are:

- creativity;
- ability to think holistically;
- leadership;
- interaction with people;
- emotional intelligence;
- self-confidence;

- decision-making skills;
- ability to negotiate;
- flexibility;
- customer orientation.

Based on this, we can say that in recent years preference has been given to Soft skills. At the same time, "hard" (professional skills) are receding into the background, although they are also considered when hiring (World Economic Forum, 2020). Thus, by having "soft skills", the future specialist can build a career and achieve success in the workplace.

It should be noted that soft skills are equally necessary for work and everyday life. Most of them are used to achieve goals in other areas. "Soft" or "social skills" are paramount when a person climbs the career ladder. That is because the number of employees in person's subordination increases. There is an increase in the number of consultations on various issues, which requires appropriate competencies (European Dictionary of Skills and Competences, 2020).

Considering the above, it is possible to say that a professional specialist should work on the constant development of soft skills. For this purpose, he can attend various courses and training and use other interactive and distance learning forms. Only in this way it's possible to achieve success in the sphere of activity (Capretz & Ahmed, 2018).

The development of soft skills is an essential part of the educational program of many domestic and foreign universities because their presence is a fundamental requirement of most employers. Interactive teaching methods are used to study a foreign language to create communicative situations close to natural working conditions. Thanks to this, the future expert is much easier to adapt to the new workplace.

Thus, a specialist's personal and professional development requires the acquisition of soft skills. At the same time, the development of specific soft skills and the extent of modern employers' needs for specialists with such skills remain insufficiently studied.

Objectives. The study aims to determine the need for developing soft skills competencies for university students to analyze the features of this process while studying a foreign language.

3. Materials and methods

The first part of the study considers the proportion of new skills developed by 2022 in the global market. Then, the trends that are observed in need of new skills are evaluated based on statistical data from the World Economic Forum 2020.

The second part of the study is based on a questionnaire survey of students, managers of universities, and companies. A test of L. Thurston Zamfir, modified by A. Rean, was

used to determine the level of soft skills (Kmentová, Cruz-Laufer, Pariselle & Smeets, 2022).

Analytical and synthetic methods were used to define "soft skills" and study their characteristics. Among other methods used to conduct the study, it is necessary to note the comparative method, the method of analogy, the method of classification, and the method of systematization and generalization (Cornalli, 2018).
Results.

With the aim of the empirical study of employers' requirements and their level of satisfaction by graduates, we conducted a questionnaire survey among applicants, businesses, and heads of educational institutions. All participants of the survey are residents of Ukraine. Based on the results of the survey, we received 30 responses from business applicants, which showed that the most needed soft skills over the next five years are:

- problem-solving ability;
- data processing;
- negotiating;
- flexibility.

In order to meet these demands with employees, they must:

- Be responsible and focused, work for results;
- have contextual thinking that allows them to analyze and synthesize information;
- develop communicative skills, have sufficiently developed emotional intelligence, which allows you to feel the interlocutor and respond to requests, requests or suggestions in a relevant way;
- be able to predict future events based on experience, and quickly adapt to a changing environment.

The respondents' answers in Figure 1 show the importance of each characteristic.

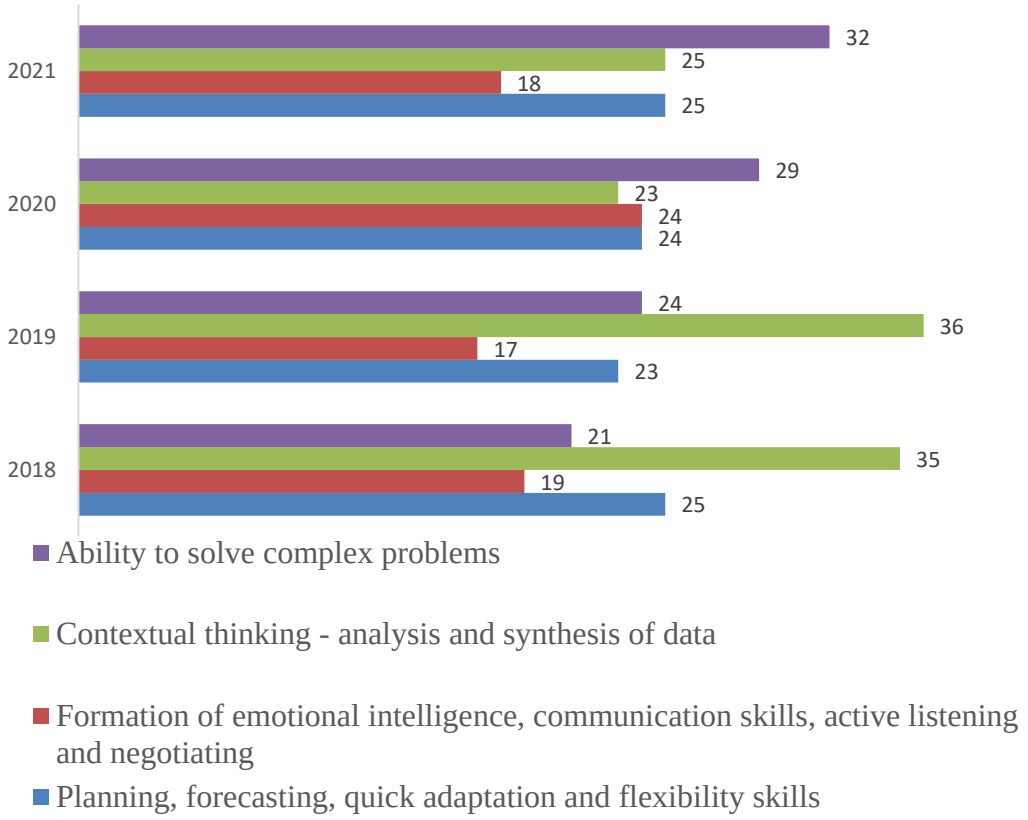

Figure 1. The most required soft skills characteristics for personnel (from the point of view of international company managers, %)

According to the figure, the essential skill for employers in 2021 is the ability to data analysis. However, even though the requirement for this skill is decreasing, there is still a lack of specialists in the labor market who have analytical thinking.

The demand for networking and forecasting skills is relatively stable. However, the demand for specialists who can solve complex problems is overgrowing. For example, while the importance of this skill was 21% in 2018, by 2021, one-third of employers consider this skill to be one of the essentials.

In order to meet employers' demands, the labor market must produce professionals who meet the needs. Higher education institutions are responsible for training specialists, so their response to the opportunity to meet market demand is also essential. We obtained it through a survey of the heads of higher education institutions that train specialists in linguistics. The results of data processing are shown in Fig.2.

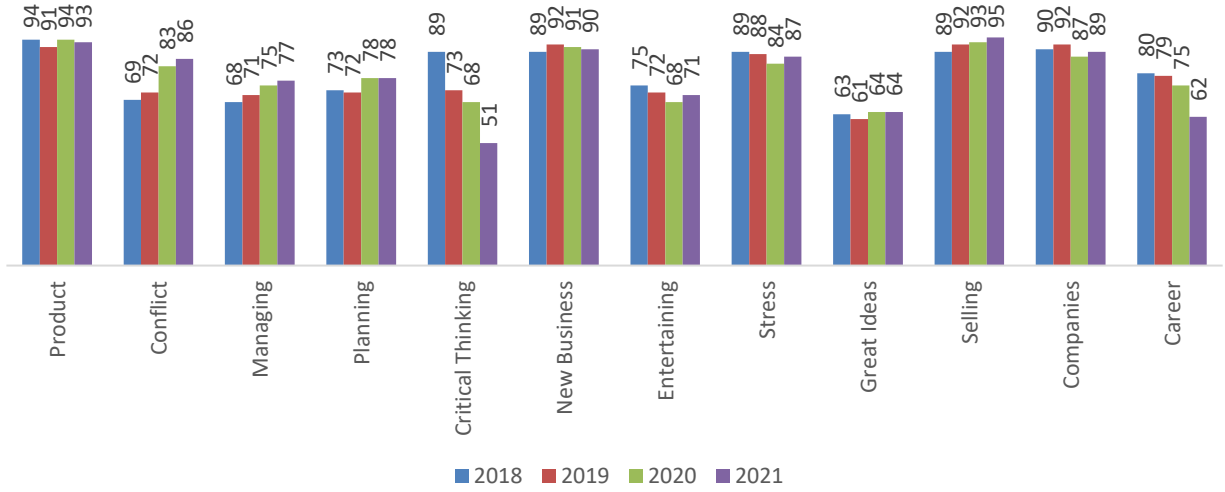

Figure 2. Methodological, technical and staff capacities of teachers to develop soft-skills for linguistic students
(In terms of university managers)

According to the survey of higher education executives, graduates have good product and communication skills. However, the personal skills indicator for starting a business and increasing sales is slightly lower. It is important to note that higher education institutions cannot realize the possibility of training specialists with critical thinking or workers who can generate ideas. In order for a worker to have such skills, he must acquire them outside the higher education institution.

The results of the survey of university leaders in Ukraine confirm the report of the World Economic Forum 2020. According to this report, the top 10 key competencies in the labor market form:

- analytical thinking and innovativeness;
- ability to learn quickly;
- the ability for complex problem solving;
- analytical and critical thinking;
- initiative and creativity;
- leadership qualities;
- implementation and control of new technologies;
- technological design and programming;
- stress tolerance and adaptability;
- logical, consistent thinking.

According to the results of the study of theoretical scientific literature, it can be concluded that there is not enough research on the nature of soft skills. In this regard, there are not enough methodological and practical recommendations for the organization of the

educational process. Thus, we have developed criteria that allow us to evaluate the effectiveness of traditional and non-traditional methods of soft skills formation.

To begin with, we determined the significance level of all the criteria and gave them a score. As a result, we obtained the average score and the final result based on the average value. The result of the research is shown in figure 3.

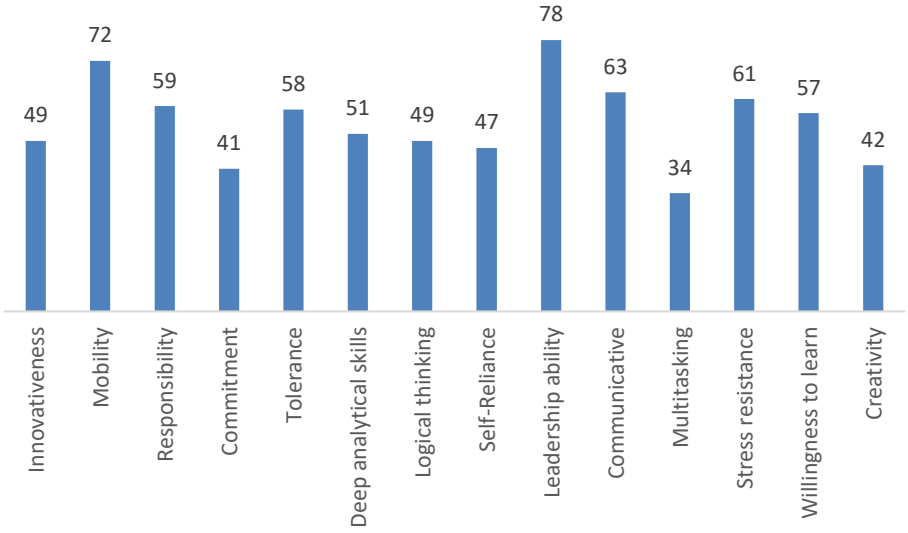

Figure 3. Students' soft skills level in teaching a foreign language (based on the results of the university survey, %)

According to the data processing results, students understand that soft skills are considered to be more in demand in the labor market today, which can be even more privileged than special professional skills. But, at the same time, the skills that graduates receive in higher education do not meet the needs of company managers.

4. Discussion

Many employers consider soft skills as important as professional skills, especially in professions where knowledge needs to be updated regularly, such as law, accounting, design, IT, etc. O. Chulanova and O. Bogdan researched 16 European countries and found that 93% of employers consider soft skills more important than professional skills (Chulanova & Bogdan, 2020). The study found that educational institutions, during the training of professionals, need to pay attention to:

- the ability to form effective communications, which comes with the ability to listen actively, keep the conversation going, and ask in the right tone;
- the ability to solve complex or important problems, as most novices tend to step away from complex tasks and pass them on to more experienced professionals.

Similar results were confirmed by the heads of international universities in Ukraine, who showed that students' critical thinking skills are pretty weak. Also, students cannot initiate ideas in business development or improve their work.

Studies show that linguistic students' soft skills are developed differently. The range of development is quite extensive, from 34% to 78%. However, the average figure is 54%. Under the same conditions, specialists with high and low soft skills can be formed. It means that to a greater extent, the acquisition of these qualities depends not on the university or its program but on the student's characteristics, which they form in the family or their living environment.

It is also necessary to underline that the question of soft skills development is urgent not only in Ukraine. It is a problem in the developed world community, where developed business structures require the formation of effective teams.

We can conclude that for a linguistic student to meet the market's requirements, they should develop soft skills within the program of study at the university and independently, using other methods. At the same time, it is not so easy to solve the problem of improving soft skills training at the university. The thing is that unlike professional skills, which can be assessed and monitored, it is pretty challenging to evaluate personal qualities according to a standard methodology or scale. Similarly, it is impossible to determine the level of possession of personal qualities at work. While qualification requirements can be described in job descriptions, soft requirements can only be described as a whole, with no specific indicators for each characteristic. The assessment of a specialist's personal abilities is often subjective, which makes the assessment incorrect.

Educational institutions can use these analytics to identify academic programs' weaknesses and to create methodological recommendations for developing soft skills among language students.

5. Conclusions

In the conditions of developed markets and business structures, the need for specialists with advanced soft skills is growing. The problem is also relevant to the Ukrainian labor market, where managers feel the lack of young professionals capable of making responsible decisions, solving problems, developing and maintaining business processes after graduation.

Studies have shown that for employers, the presence of soft skills is not only considered basic but an immediate need. The main characteristics are readiness for communication and negotiation, transfer of business from one direction to another, self-development, fast learning, emotion management, ability to cope with stress, anticipate and reduce risks, flexibility, creativity, critical and rational thinking.

Mastery of such characteristics allows the student to successfully find employment and strengthen their competitive qualities in the labor market. The development of soft skills needs to use interactive teaching methods, which allow within the framework of business games and simulations to sharpen the qualities and be ready for market demands.

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Psychological and pedagogical principles of the organization of distance learning of primary school-aged children with cognitive development disorder

Principios psicológicos y pedagógicos de la organización del aprendizaje a distancia de niños en edad escolar primaria con trastorno del desarrollo cognitivo

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Abstract

The research involved children and parents of primary school-aged children with cognitive development disorder, as well as scientific and pedagogical workers who organized the psychological and pedagogical principles for organizing distance learning. The purpose of the research lies in establishing how effectively children, parents and their teachers cope with online distance learning during the pandemic, as well as investigating the extent to which such educational technology affects the emotional and behavioural state of the child. The research methodology is based on complexity. In the course of the research, the method of pedagogical experiment was used; observation and questionnaire methods were also introduced; the descriptive method, analysis and synthesis were used to review the theoretical material. The hypothesis lies in the fact that distance online education increases academic difficulties, changes the behavioural and emotional picture of a child with cognitive development disorder; consequently, the behaviour and emotional background will be limited by certain parameters, and this requires the active involvement of parents and teachers in the distance work process. The results of the research have revealed that distance education causes a number of restrictions for children with cognitive development disorder, namely: concentration of attention has decreased, anxiety has increased, and sleep has worsened. Behavioural changes predicted increased restlessness and aggression. Parents and teachers have had methodological, academic and everyday difficulties; all participants in the educational process have been more limited in the conditions of online distance learning. A complex of psychological and pedagogical fundamentals of education, additional classes with parents, and consultations with teachers help to cope with negative changes. In the future, it is worth continuing the study of the impact of the using psychological and pedagogical measures in the conditions of distance education, their impact on eliminating difficulties and improving the behaviour and emotional states of all participants in the educational process.

Key words: distance education, coronavirus, child psychology, health services.

Resumen

La investigación involucró a niños y padres de niños en edad escolar primaria con trastorno del desarrollo cognitivo, así como a trabajadores científicos y pedagógicos que organizaron los principios psicológicos y pedagógicos para organizar el aprendizaje a distancia. El propósito de la investigación radica en establecer qué tan efectivamente los niños, padres y sus maestros enfrentan el aprendizaje a distancia en línea durante la pandemia, así como investigar en qué medida dicha tecnología educativa afecta el estado emocional y conductual del niño. La metodología de investigación se basa en la complejidad. En el transcurso de la investigación se utilizó el método de experimento pedagógico; también se introdujeron métodos de observación y cuestionarios; para la revisión del material teórico se utilizó el método descriptivo, el análisis y la síntesis. La hipótesis radica en que la educación a distancia en línea aumenta las dificultades

académicas, cambia el cuadro conductual y emocional de un niño con trastorno del desarrollo cognitivo; en consecuencia, el comportamiento y el trasfondo emocional estarán limitados por ciertos parámetros, y esto requiere la participación activa de padres y maestros en el proceso de trabajo a distancia. Los resultados de la investigación han revelado que la educación a distancia provoca una serie de restricciones para los niños con trastorno del desarrollo cognitivo, a saber: la concentración de la atención ha disminuido, la ansiedad ha aumentado y el sueño ha empeorado. Los cambios de comportamiento predijeron una mayor inquietud y agresión. Los padres y docentes han tenido dificultades metodológicas, académicas y cotidianas; todos los participantes en el proceso educativo se han visto más limitados en las condiciones de la educación a distancia en línea. Un complejo de fundamentos psicológicos y pedagógicos de la educación, clases adicionales con padres y consultas con maestros ayudan a hacer frente a los cambios negativos. En el futuro, vale la pena continuar el estudio del impacto del uso de medidas psicológicas y pedagógicas en las condiciones de la educación a distancia, su impacto en la eliminación de dificultades y la mejora del comportamiento y los estados emocionales de todos los participantes en el proceso educativo.

Palabras clave: educación a distancia, coronavirus, psicología infantil, servicios de salud.

1. Introduction

The educational realities of the XXI century related to the COVID-19 pandemic have opened up a number of problems and challenges for the educational community; consequently, it is always necessary to focus on the evolution of educational systems (Anis, 2017). Changes in the psychological and pedagogical attitudes of teaching children of primary school age with cognitive development disorder are no exception (Bonati et al., 2018).

Modern social standpoints regarding work with inclusion require new innovative approaches, an active attitude to development, education, communication of a child with various types of disorders. This stimulates Ukrainian education, inducing to apply various means for the development of the child's personality, and the situation regarding the need to introduce remote forms dictates the search for ways to form virtual learning and communication skills. This determines the scientific issues of a number of modern investigations in pedagogy, teaching methodology, psychology and sociology.

The intellectual development delay of the child is associated with various neurodevelopmental disorders, a deficiency in brain functions, on which memory, motor skills, behavioural fundamentals, and impulse control depend (Wolraich, et al., 2019).

Children with intellectual development delay have different forms and degrees of retardation (severe, medium, light). This is expressed in retardation of the development of mental abilities and behavioural skills relative to the actual age. Some problems connected with a minor delay are not detected until the child goes to primary school and

feels the difficulties of the academic load. Along with this, the issues related to the difficulties of distance education pose new challenges to theorists and practitioners of teaching methodology in primary school. Children with a medium intellectual development delay are diagnosed during preschool age; this precisely why such children need active and correct treatment, otherwise they start to lag behind their peers significantly. Work with such children requires a lot of effort and skill from everyone around them. For this reason, a number of the researchers have discussed the psychological and pedagogical principles of the organization of distance learning of the child in the conditions of restrictions caused by the pandemic (Zhang et al, 2020).

In the conditions of implementation of distance education guidelines, it is worth working on creating favourable conditions for the child. All participants in the educational process, including parents, should be familiar with and use different formats of distance learning, which will allow maximally reducing the discomfort, difficulties and anxiety states of a child with cognitive development disorder, mitigating the negative effects inherent in educational realities in a post-Covid society.

2. Aims

The purpose of the research lies in establishing the level of effectiveness of the pedagogical and psychological principles of organizing and implementing the online distance learning of children with cognitive development disorder in the conditions of pandemic restrictions, as well as investigating the extent to which such educational technology affects the emotional and behavioural state in the practice of work of with children with intellectual development delay.
Based on the research purpose, it is planned to perform the research tasks as follows:

- to determine the demographic and professional characteristics of the respondents;
- to introduce changes in the education sphere regarding using the distance education technology and in the process of its application;
- to establish the level of interest of participants (students, teachers, parents) in the activities of the educational program (author's development).

3. Literature Review

The psychological and pedagogical principles of the organization of the educational process in the conditions of distance education were studied and considered in many aspects; this was due to the urgency of the issue and the need to urgently move to distance forms of education (Liu et al., 2021). The ways of stimulating the teacher in every possible way to support manifestations of independence and interest in the educational process are considered; the ways to choose more flexible methods of presentation of materials and control of knowledge are discussed (Muldrew, Miller, 2021); study of communication difficulties that arise when working in an educational space with inclusion is conducted. A number of communication difficulties experienced by students with

disabilities during education were described and analysed (Ashinoff, Abu-Akel, 2021), as well as the problems of working with parents as participants in the educational process for a child with intellectual development delay were also considered.

An important aspect of the investigations on the features of working with inclusion in the educational process is the consideration of the individual characteristics of the student, psychological differences and individual traits of all participants in the educational process, which contributes to the improvement of achievements in educational activities (Dweck, 2017).

From a therapeutic point of view, the algorithm of using psycho-pedagogical methods was considered as one of the main key components of success; the improvement of the condition was established, as well as the opportunity to offer the child adequate schooling, supporting their self-esteem and motivation in the long term (Longstreth et al., 2016), general promotion of psychophysical well-being (Cortese, 2020). The important discoveries have been made in the field of identifying the difficulties faced by a child with delayed intellectual development – reduced motivation (Morsink, et al., 2021) and ways to overcome it (Shulman, 2018; McIntosh et al., 2021).

Modern problems of teaching children with intellectual development delays were also discussed, forasmuch as the COVID-19 pandemic led to the closure of specialized schools or restricted access to them (UNICEF, 2020). The practice of using the services of an additional teacher (professional educator) as a support and a way to facilitate communication and the learning process was also discussed.

Distance online learning was widely used due to pandemic restrictions; however, the school system was not ready for it; consequently, it did not have the full range of technological tools, developed methods and practice of their using and applying. The Italian researchers even described situations where 57% of students shared their own computers with their family members (Save the Children Italia Onlus, 2020).

Research groups also carried out investigations concerning the impact of quarantine restrictions on children's studying at school. These children were deprived of the main context of learning, socialization, and the usual rules of communication (Segre et al., 2021). There are scientific works that have revealed that such a situation became especially traumatic for children with delayed intellectual development, physical and emotional development difficulties (Zhang et al., 2020). Changes in the schedule and life structure of such kids were undesirable, forasmuch as they destroyed important coping mechanisms.

Practical investigations were carried out in the direction of searching for effective models of work in conditions of distance education with children with ADHD and special needs, that is, for those who need a regular, clear daily schedule, a structured life schedule as part of the mechanism for overcoming disorders. The present academic paper has also considered the difficulties faced by parents, educational and pedagogical staff working

with children with special educational needs, namely: a sharp change in life cycles, the need to work at home and take care of children at the same time (Liu et al., 2021). It has been established that behavioural symptoms of anxiety, depression, PTSD, psychophysical discomfort were observed in all participants of the educational process (Mukhtar, 2020; Brooks et al., 2020).

Along with this, a number of surveys were conducted during the first wave of the COVID-19 pandemic, where an online survey of mothers of primary and secondary school students (children of 6-15 years old) was organized; the research goal was to study the experience of educational institutions in the field of additional education and its consequences for psychological well-being of children and academic performance (Scarpellini et al., 2021).

4. Methods

Theoretical methods of analysis and synthesis, descriptive method have been used for the effective implementation of the educational program presented in the research on using the psychological and pedagogical tools in the conditions of distance learning of primary school children with cognitive development disorder.

The research goal also envisages the involvement of the possibilities of empirical (diagnostic) methods in the successful implementation of the scientific work. This is, in fact, a pedagogical experiment, as well as survey methods (written form) and observation.

Educators, teachers, primary school students and parents of children have been involved in the implementation of the program (Khmelnytskyi Inclusive Resource Centre № 1). The children who took part in the experiment were diagnosed with cognitive development disorder of moderate and mild degree.

The method of pedagogical experiment was used during one academic year (2021-2022). This method was used to determine the feasibility of actively introducing the psychological and pedagogical principles of organizing distance education for children with special educational needs in elementary school (assessment of innovations in distance education, the need for adaptive programs and an individual approach by teachers, parents). It was also necessary to establish how effective it is to introduce the psychological and pedagogical principles of adaptation to the new educational environment into the educational process, as well as the means of preparing a primary school student for the realities of modernity. The observation method was auxiliary to the pedagogical experiment. Statistical methods will make it possible to obtain and evaluate the results of the experiment.

The measures described in the academic paper were aimed at reducing stress, anxiety states, stimulating children and parents to personal growth. They were considered in the scientific work from the standpoint of observation. The observation method is empirical;

therefore, the research group was not able to determine the proposed psychological and pedagogical principles as a comprehensive universal program, the basis of systemic changes.

A total of 20 2nd grade children, 32 parents, and 7 teachers were involved in the experiment. The variable in the classroom is the introduction to the approval of the educational program aimed at the active personal development of the child. Everyone agreed to participate in the experiment; the parents signed an additional agreement for permission to children's participation in the cognitive research program. The research group, having received the consent of the administration of the educational institution, signed a memorandum guaranteeing the preservation of privacy and anonymity of all participants.

Stage 1. Preliminary preparation of educational materials and their adaptation to the realities of distance learning was carried out. Monitoring of available technical means and educational technologies available to students, teachers and parents in the conditions of distance education was also carried out. Surveys were also conducted regarding the demographic situation, professional level of parents, living conditions and education of the respondents. The schedule, content and stuffing of additional classes and discussions with students, parent consultations were being formed.

Stage 2. At this stage, in parallel with training, conducting consultations for parents, and the active work of teachers on adapting all participants to the conditions of distance education, monitoring of indicators and learning outcomes prior to using the distance education technology was carried out, the beginning and end of the process of using innovative psychological and pedagogical principles in conditions of distance education. Conversations with parents and consultations with teachers were regularly held.

Stage 3. At the final stage, the level of interest of parents, teachers, and children in the implementation of the program was monitored, involving recording the level of attendance by parents of individual online consultations, the use of psychological tools for the development of the child's personality. The results of parents' attendance at counselling classes were also determined.

Regarding the difficulties that arose during the implementation of psychological and pedagogical innovations, the following ones should be identified, namely: the duration of the program (1 initial year); along with this, the research group did not have the opportunity to determine the reasons for the ratings given by the respondents; it is not possible to conduct qualitative in-depth research.

5. Results

The psychological and pedagogical principles of the organization of distance education for children with the intellectual development delay provide for the application of psychological means of influence, therapeutic and preventive measures, the presence

and constant use of specialized educational materials and tools, thanks to which it will be possible to reduce stress, anxiety and depressive states arising during the transition to distance forms of education in the conditions of the pandemic.

The psychological and pedagogical tools used in the framework of distance education include as follows: an individual and comprehensive approach to the student in the circle of his communicators; learning and using innovative technologies, creating an individual schedule for each family, choosing the most necessary technologies; provision of technical means necessary for online education; psychological readiness of parents and teachers to use innovations; ongoing therapy activities and adaptation to online activities and training; formation of individual programs; acmeological technologies, etc.

In the process of preparation and implementation of such a program, researchers had to understand the level of living conditions, employment, family status, age of the respondents; these are such factors that can significantly affect the quality of learning in the distance education system.

Table 1.
Demographic, professional, household characteristics of respondents (author's development)

№	Parameters	Respondents
1	Age of children	
	8	18
	9	2
2	Gender of children	
	Male	12
	Female	8
3	Flat	
	1 room	6
	2 rooms	10
	3 rooms	4
	House	1
4	Performance level	
	Low	6
	Medium	11
	High	3
5	Education of the mother	
	Secondary, special	10
	Higher	21
6	Employment	
	Unemployed	0
	Housewife	15
	Employed	16
7.	Mother's work/family balance	
	Difficulty	26
	There are no difficulties	5

As it can be observed from the table, the vast majority of participants in the educational process experience difficulties in maintaining a work / family balance, forasmuch as work has been transferred to home in the conditions of the pandemic. Parents have to work and take care of the child at the same time. This has required an individual approach, development of flexible training schedules, treatment, and counselling. Preparation of individual meetings, as well as training records, which could be reviewed as many times as needed at a convenient time.

At the second stage, changes were measured in the pattern of respondents' perception of learning at the beginning of the use of distance learning technology and at the end of training. The first survey was conducted at the beginning of the academic year, and the final one at the end of the academic year. The results are presented in percentages.

Table 2.
Changes in the learning process prior to using the distance education technology and at the final stage of its using (author's development)

№	Conditions	Group At the beginning	Group Final
1	Concentration of attention		
	yes	35%	46%
	no	75%	54%
2	Breaks		
	every 15 min.	76%	58%
	30 min.	20%	38%
	45 min.	4%	4%
3	Autonomy of the child	45%	62%
4	Quick fatigue	87%	80%
5	Attention captured by the video	65%	73%
6	Time for distance online learning		
	4 hours		
	6 hours	28%	26%
	12 hours	62%	66%
		10%	8%
7	Use of the Internet	89%	98%

According to the results of the survey, it is obvious that distance education requires the use of modern digital technologies; the condition for successful overcoming problems is the availability of the Internet. The number of participants of the program using the Internet increased by 9% after its completion. By the end of the work, the concentration of attention improved by 11%; the child's autonomy increased by 17%; the number of students who needed a break every 15 minutes decreased (19% less). This testifies to the adaptation of 46% of respondents to the realities of online distance learning.

Along with this, at this stage, a detailed survey was conducted regarding changes in the respondents' behaviour and symptoms.

Table 3.
Changes in the behaviour and symptoms of the respondents at the beginning and at the final stage of distance learning implementation (author's development)

№	Parameters	Group (beginning of the experiment)	Group (end of experiment)
1	Lack of perseverance	87%	80%
2	Aggressiveness	47%	34%
3	Anxiety	84%	78%
4	Behavioural lability	65%	63%
5	Rhythm of sleep		
	Normal	14%	42%
	Got worse	86%	58%

As can be observed from the results in the table, children had the biggest problems with rhythm of sleep: at the beginning, it accounted for 86% of deteriorations, but in the process of participating in the experiment, the number of sleep disorders decreased by 28%. Reducing the negative impact of the destruction of the usual lifestyle as one of the fundamentals of a child's stability, decreasing anxiety and aggressiveness, indicate the need for changes in the rhythm, system and educational approaches in distance learning, and especially in the conditions of working with primary school-aged children with cognitive development disorder.

Final stage. At this stage, a survey was introduced regarding the evaluation by the participants of the experiment on the effectiveness of using a set of psychological and pedagogical tools for adaptation and implementation of distance learning.

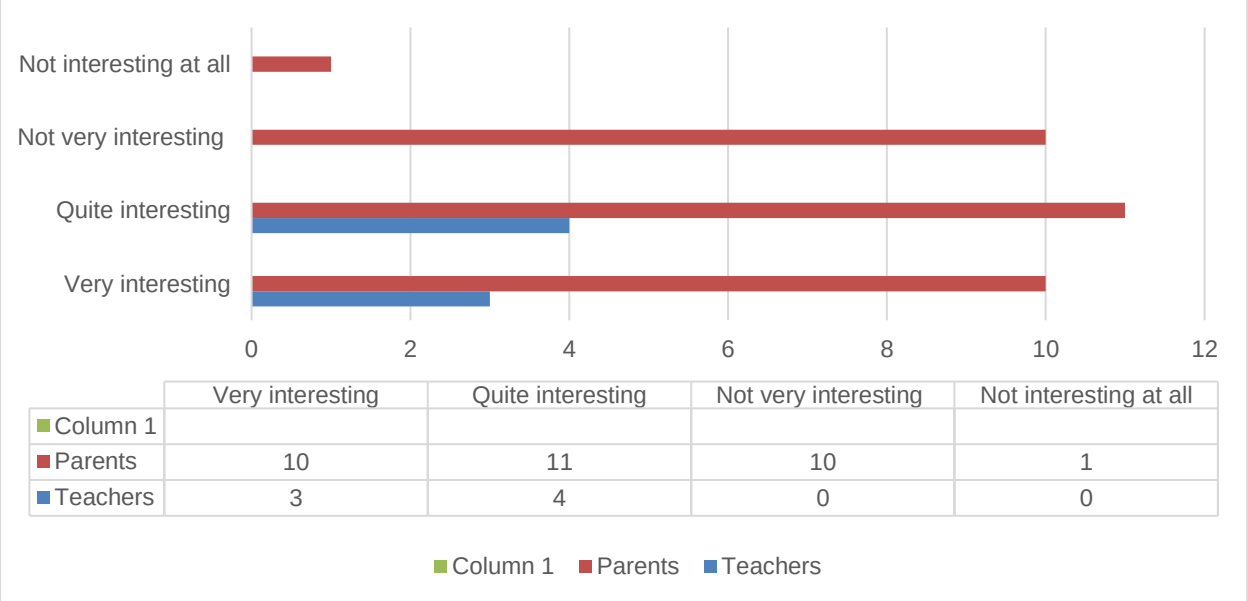

Figure 1. Graphic representation of the interest level of participants (students, teachers, parents) in the work of the program (author's development)

As the result of the diagram have shown, the involvement of a complex of psychological and pedagogical means of distance education organizations was quite positively assessed by teachers (all 7 respondents have rated the program as interesting). From among the respondents who found the program not interesting at all, 1 person, and 10 parents found it not very interesting. However, the vast majority of parents (21 people) were inclined towards the introduction of active forms of adaptation of the whole family to the conditions of distance education.

At this stage, a study of the frequency of attendance organized for parents as part of the educational program was also conducted.

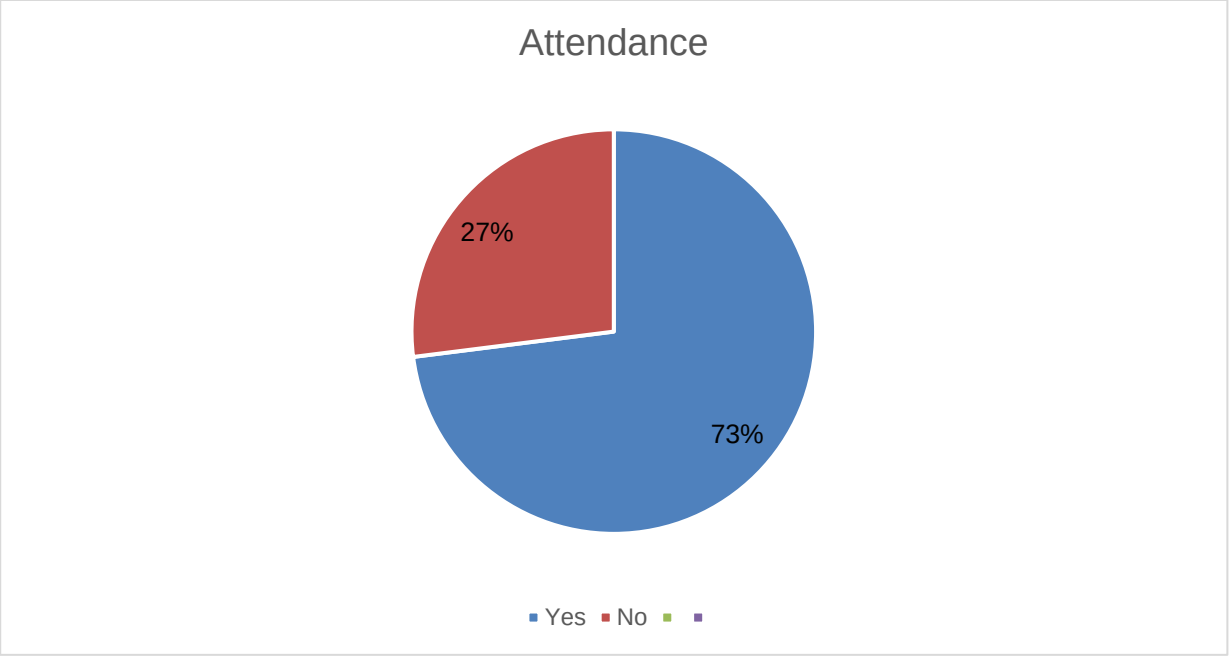

Figure 2. Graphical description of the attendance of individual online consultations by parents (author's development)

The high level of attendance of classes by parents (73%) shows the motivation of parents to acquire skills for working with a child, which requires intensive attention, especially in rapidly changing conditions. It should be noted that in the course of the research, the respondents' interest in applying the potential of the psychological and pedagogical arsenal of tools in primary school in conditions of pandemic restrictions has been revealed.

6. Discussion

The issue of inclusive education, especially its problematic nature in the context of pandemic restrictions of modern pedagogy, has broad prospects and is determined by thematic diversity. In the investigation (Tessarollo et al., 2022) dedicated to the diagnosis of behavioural changes in children with ADHD in online learning conditions, it has been

established that concentration of attention, spontaneous mood changes, autonomy in distance learning are more limited, especially in the group of children with ADHD. Behavioural changes were present in all groups; they accounted for 64,2%; mainly restlessness, aggressiveness and anxiety have been noted. Compared to the control group, children with ADHD had worse results by 21,7%. In our research, a high level of anxiety was also determined; at the end of the experiment it was 78%, aggressiveness - 34% and anxiety - 78%. However, it should be noted that in the process of applying a complex of psychological and pedagogical tools, this tendency decreased by a total of 9%. Accordingly, it will be necessary to assess the consequences of the quarantine in the future and plan a set of actions for recovery.

A number of studies also have established a tendency to reveal numerous emotional and behavioural symptoms of anxiety, depression, PTSD, in adults and children receiving education under quarantine restrictions, as well as the appearance of mental discomfort, in general (Bonati et al., 2021). As our research shows, the presence of anxiety states connected with a sudden and essentially forced change in the learning rhythm is a great challenge for adults and a significant test for children with intellectual disabilities. The primary students had problems with the rhythm of sleep; however, during the application of a complex of psychological and pedagogical measures, the number of sleep disorders decreased by 28%, and the negative impact on the child's lifestyle also decreased. This indicates the need for changes in the rhythm, system and educational approaches in distance learning when working with children with cognitive development disorder.

An important component of modern pedagogical programs is the practice of professional counselling in an educational institution. Hainagiu S. (2020) considered the counselling program, which was introduced as a mandatory part of the educational process. According to the results of the study, attendance at such consultations was 99% of the 95 participants of the experiment. Moreover, 74% of respondents noted this program as an interesting one. In the research presented by us, the attendance by parents of students obtaining education under the studied program was 86%. This indicates the need to continue experimental investigations in order to search for effective forms of learning in the conditions of distance education.

7. Conclusion

Participants of the educational program (parents and teachers), which provided for the use of a complex of psychological and pedagogical principles of distance education for primary school-aged children with cognitive development disorder, showed a high degree of satisfaction with the proposed measures for the comprehensive adaptation of children and parents to the realities of distance education (68% of respondents identified the activities as interesting ones). Parents expressed their approval towards the practice of attending individual consultations and joint classes with the child (83%).

In the course of the application of the complex approach, children gradually adapted to new conditions. The level of aggressiveness and anxiety decreased, the sleep rhythm partially recovered. These results indicate the need for parents and educators to be aware of a comprehensive approach to the use of pedagogical and psychological tools supporting the stability of primary school-aged children with cognitive development disorder. The introduction of such training programs should occupy a worthy place in the field of school education.

In the prospect, when planning the setting up of schools for offline education, it is worth considering possible pandemic restrictions that may last several months and be ready to use the acquired experience of distance education. Along with this, it is also necessary to continue to develop educational programs designed to facilitate the processes of adaptation to new forms and technologies of learning for children with cognitive development disorder and their parents.

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Education and science of Ukraine in the realities of large-scale military aggression and global challenges of the 21st century

La educación y la ciencia de Ucrania en las realidades de la agresión militar a gran escala y los desafíos globales del siglo XXI

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Abstract

The work characterizes the peculiarities of the functioning of education and science in Ukraine in the realities of large-scale military aggression and global challenges of the XXI century. Both general scientific and special pedagogical research methods were used in the article. Probable forecasts of the further development of education and science of Ukraine in such crisis conditions were formed using the prognostic research method. In the results, it was noted that almost the main challenge for the education of the 21st

century became a pandemic of COVID-19, which significantly affected the development of distance education. The results also consider the problem of the state of science against the background of the unfolding of the Russian-Ukrainian confrontation. The conclusions summarized that after February 24, 2022 (the beginning of the large-scale Russian invasion), the Ukrainian government facilitated the implementation of many projects related to the development of online education. But the scientific sphere of Ukraine suffers from chronic underfunding and structural deficiencies in the organization of scientific research in Ukraine. In turn, the war of 2022 demonstrated the government's willingness to sacrifice funding for science, the military developments of which turned out to be almost unnecessary.

Key words: education, science, Ukraine, globalization, Russian-Ukrainian war.

Resumen

El trabajo caracteriza las peculiaridades del funcionamiento de la educación y la ciencia en Ucrania en las realidades de la agresión militar a gran escala y los desafíos globales del siglo XXIst. Las previsiones probables del desarrollo futuro de la educación y la ciencia de Ucrania en tales condiciones de crisis se formaron utilizando el método de investigación de pronóstico. En los resultados, se observó que casi el principal reto para la educación del siglo XXI se convirtió en una pandemia de COVID-19, que afectó significativamente al desarrollo de la educación a distancia. Los resultados también consideran el problema del estado de la ciencia en el contexto del desarrollo de la confrontación ruso-ucraniana. Las conclusiones resumen que después del 24 de febrero de 2022 (el comienzo de la invasión rusa a gran escala), el gobierno ucraniano facilitó la implementación de muchos proyectos relacionados con el desarrollo de la educación en línea. Sin embargo, el ámbito científico de Ucrania padece una falta de financiación crónica y deficiencias estructurales en la organización de la investigación científica en el país. La guerra de 2022 demostró la voluntad del gobierno de sacrificar la financiación de la ciencia, cuyos desarrollos militares resultaron casi innecesarios.

Palabras clave: educación, ciencia, Ucrania, globalización, guerra ruso-ucraniana.

1. Introduction

The development of education and science in Ukraine is a complex and multifaceted process to study, as it is extremely difficult to assess and investigate all its manifestations in one synthetic study. Ukraine inherited from the Soviet Union a clear division into educational institutions (mostly university centers) and scientific institutions (mostly grouped around the National Academy of Sciences of Ukraine). The coexistence of these structures is little understood by many European and American researchers, since there are not many separate “academies” outside of Ukraine, and scientific research is carried out directly in universities along with pedagogical activities. At the same time, Russian aggression has exacerbated questions about the future of Ukrainian education and science - the direct invasion in February 2022 has actualized the difficulties of developing

these industries in the face of hostilities. The proposed article deals with the problems and challenges facing Ukrainian science (in a historical retrospective), and the peculiarities of higher education functioning during the COVID-19 pandemic and during open hostilities. Therefore, the purpose of the study is to analyze Ukrainian education and science in the realities of large-scale military aggression and global challenges of the 21st century in a broader context.

2. Literature Review

This paper uses modern pedagogical literature, which reflects modern educational problems against the background of the globalization changes of the 21st century. For example, Mas-Verdu et al., (2020) analyzed the main challenges in modern higher education, compared the features of learning in local and national universities. At the same time, Kelly (2021) described the key requirements for modern education and described the main educational competencies. Demiray (2017) investigated the problem of distance education, described its advantages and disadvantages in comparison with the traditional system of teaching. In addition, Kem (2022) characterized the key conditions for the effective use of online education and described the advantages and opportunities of person-centered learning. Despite this, for this article the works of those authors who have investigated the problem of the functioning of the education system in military realities are valuable. For example, Kretzmer & Ronen (2021) described the state of education and science in the occupied territories through the legal plane. At the same time, Gordon (2022) described the functioning of university education in Israel during the war. Gordon (2022) points out that in the 1970s Israeli authorities allowed Palestinians to form universities in the occupied territories in order to develop higher education. Such a decision would have contributed to the normalization of the negative situation in education. However, such actions did not have a positive effect. The point is that the universities established during the occupation have become political rather than educational institutions. On the other hand, Chankseliani et al., (2020) characterized the state of education in the Russian-occupied Georgian territories (it refers to Abkhazia and South Ossetia). At the same time, Rajab (2018) investigated the specifics of the use of distance learning at the University of Najran in military conditions.

Note that for this work weighty studies of the impact of the Russian-Ukrainian war on key industries in Ukraine. In particular, Herbst, Aslund, & Kramer (2022) described the main consequences of this war, and the main focus of these specialists paid attention to the destruction suffered by the social and cultural spheres. At the same time, Ghilès (2022) characterized the unfolding of the Russo-Ukrainian war through the prism of geopolitical significance. In spite of this, the research of the state of education in Ukraine, taking into account the rapid deployment and transformation of the Russian-Ukrainian war since 2022, remains an urgent task in the future.

For this reason, we consider that the relevant task remains the characterization of the main changes (primarily negative), that the scientific sphere of Ukraine has undergone since February 2022.

3. Methodology

Both general scientific and special pedagogical methods of research were used in the work. Among the general scientific methods, we distinguish analysis, synthesis, induction, and deduction. With the help of analysis, the main subject of research was divided into smaller elements (coverage of the situation of education in Ukraine under conditions of war, the problem of reorganization of education, the functioning of the scientific sphere during the Russian-Ukrainian war, the impact of the war on the development of science in Ukraine). As a result of using the principle of synthesis, the previously highlighted elements were combined and the own conclusions of the prospects of the further situation of education and science in Ukraine were formed. Based on the use of the method of concretization the peculiarities of distance learning implementation in the educational and scientific areas of Ukraine were characterized. As a result, it is noted that since the beginning of a full-scale Russian invasion (February 2022) almost all educational institutions in Ukraine switched to a distance learning format. Despite this, several distance platforms have been created to promote education at all levels. The article is also built on the use of the method of abstraction. This method is based on a gradual transition from abstract theoretical things to concrete conclusions and recommendations. The specified method was applied in covering the main trends in the development of education and science in Ukraine through the prism of the influence of the Russian-Ukrainian war on their condition. At the same time, based on the comparativist method, it was possible to determine the main changes in the educational and scientific sector of Ukraine through a comparative prism. With the help of the prognostic method of research, possible forecasts of further development of the examined branches have been formed, besides, the article outlines an indicative list of actions to be applied to resolve the crisis in the educational and scientific spheres of Ukraine. The article is formed on the use of the system method of research, which is based on the consideration of education as a complex set of many parts. Such methods of research as a functional, retrospective, historical, structural became additional methods for this work.

4. Results and Discussion

Education in Ukraine in the Realities of the Global Challenges of the 21st Century and Large-Scale Military Aggression.

Perhaps the most important global challenge of the twenty-first century has been the Covid-19 pandemic. Even though even before the pandemic, the world's population was facing considerable difficulties in realizing the right to education as a basic human right. Despite near universal primary school enrollment in most countries, many children - more than 250 million - were not in school and nearly 800 million adults were illiterate. Moreover, even for children enrolled in schools, the acquisition of new knowledge was by

no means guaranteed. An estimated 387 million (56 percent) of the world's primary school-age children lacked basic reading skills. The challenge of funding education even before COVID-19 was extremely difficult to meet. By early 2020, the funding gap to achieve sustainable quality education in low-income and lower-middle-income countries was estimated to be a staggering $148 billion annually. THE PROJECTIONS SHOW A STAGGERING $148 BILLION PER YEAR. The COVID-19 stipulated crisis is projected to increase this funding gap by about a third (Gvishiani, 2016).

The COVID-19 pandemic disrupted daily life, and approximately 40 million children around the world, who will soon be starting school, missed out on important preschool education (Bogatchuk et al., 2022). Consequently, they have been deprived of opportunities to be in a nurturing environment, learn new skills, interact with peers, and (in some cases) receive proper nutrition. During the COVID-19 crisis, about 40 percent of the poorest countries failed to support students at risk, and past experience shows that both educational inequalities and gender inequalities tend to be overlooked when outbreaks are addressed.

Against the backdrop of a health crisis that has caused tremendous social and economic upheaval, education systems around the world have been forced to respond and adapt rapidly. Governments have acted swiftly to ensure the continued education and safety of students and educational personnel by closing schools and other educational institutions. In doing so, the unequal distribution of opportunities to use different forms of learning during the closure of educational institutions will primarily lead to negative changes in the long term (Kelly, 2021).

As for the system of education and upbringing in Ukraine, the Covid-19 pandemic brought to the fore such a vulnerable factor as the low level of digitalization. The disruption of work processes has made it difficult to implement apprenticeship and on-the-job training programs, which are critical elements of a functional market need in the education system.

Many students, especially the lower grades, were hit by quarantine measures. Even if they were provided with materials they could understand, because of aspects such as homeschooling, economic hardship, and inexperience with the Internet (including poor digital skills), many children could not count on the stable environment and learning support they needed to adapt to new ways of learning (Kem, 2022).

Ensuring continuity of learning in the face of school closures became a priority for the Ukrainian government. Information technology was used for this purpose, and teachers were required to teach web-based classes. Consequently, school closures have necessitated a review of the methods used to assess student performance and, in some cases, the abandonment of them. In Ukraine, in particular, some universities have postponed exams and in some cases eliminated them. Other universities apply alternative solutions, such as conducting final exams in the format of online testing.

From the beginning of the pandemic, teachers have been tasked with introducing distance learning methods-most often without sufficient guidance, training, or resources. This occurred at all levels of education. In many cases, teachers had the opportunity to enhance their skills through participation in online programs and the use of telephone and Internet applications (Yovenko et al., 2021). Web-based classroom applications and messaging apps have become useful tools and means of communicating with students and fellow educators (Bogatchuk et al., 2022).

As countries reached a COVID-19 plateau, governments tried to stabilize the economy and began loosening restrictions, including reopening schools, while other European governments took a more cautious approach and kept schools closed for fear of a “second wave”.

Note that the closure of schools for long periods of time jeopardizes the fulfillment of the academic calendar and exams, and the implementation of catch-up programs has become nearly impossible (Bogatchuk et al., 2022). As noted above, evaluating the effectiveness of distance learning further complicates the picture. Finally, in addition to the risks to student well-being and protection (providing school meals, protecting children from abuse and violence), the need to ensure teachers' well-being and health, and to provide them with remote support, including by training them to conduct classes via the Web, must also be remembered (Kelly, 2021).

The main condition for reopening schools was the ability to provide a safe return to physical spaces while ensuring physical distancing and sanitary measures such as wearing masks and frequent hand washing. The Ukrainian reopening strategy took into account the needs of the most marginalized children, and for students with special needs, it spoke of providing appropriate health measures. During the reopening phase, achievement assessments to identify gaps and the development of catch-up or acceleration programs were critical.

Given the role that parents, caregivers, and teachers have played since the beginning of the crisis, consultation and collaborative planning for school recovery involving communities and educators have been an important part of the decision-making process.

We believe that in order to guarantee equal and inclusive education both in and out of the classroom, better training and support for teachers and communities is critical (Ayoub et al., 2020). Technology alone is not enough to achieve good learning outcomes. Even more important than training teachers in modern applications is ensuring that they have the necessary assessment and presentation skills, that they interact with students at the right level, and that they implement accelerated learning programs and differentiated instructional strategies that may become necessary once schools reopen (Mas-Verdu et al., 2020). Implementing digital solutions requires relevant content, appropriate instructional models, effective teaching methods, and supportive learning environments. (Bogatchuk et al., 2022).

At the same time, after the full-scale Russian invasion of Ukraine, it has become evident that education has become an important social system suffering from war (Rajab, 2018). Since February 2022, it became almost impossible to study as usual. Russian troops shelled schools and other educational institutions. This is a terrorist tactic condemned around the world. For this reason, distance education became relevant (Yovenko et al., 2021). Consequently, with the assistance of the Ministry of Education and Science of Ukraine since February 2022 began to actively introduce modern distance learning platforms. Note that some of them were used during the Covid pandemic, so schoolchildren, their parents, and students were familiar with some of them. For example, the Learning Without Borders program has been in place for high school students since 2019. Its idea was to systematically educate children based on cooperation with various Ukrainian TV channels. In addition, an all-Ukrainian online school was created for Ukrainian schoolchildren. Video lessons on various school subjects were distributed on this platform. The All-Ukrainian School Online has a special section called Cabinet for the teacher. Here are the basic outlines of lessons to improve learning (Ministry of Education and Science of Ukraine, 2022). To optimize it, a similarly named attitude has been formed for cell phones on the operating systems Android and iOS Apple. Psychological distance projects are of particular importance. In particular, in cooperation with leading Ukrainian teachers and psychologists, a project called “Support a Child” was launched. The main goal of the project is high-quality psychological help for both children and parents. This project is also intended for teachers. Private Ukrainian schools during the war also join in supporting the educational system. In particular, many are launching free lessons for Ukrainian schoolchildren. In particular, the “DAR” distance school has formed a learning system on a free-of-charge basis for children in grades 7-11. This provides opportunities for students to study effectively while abroad. On the other hand, Jamm School has created distance learning opportunities for high school students. In addition, the school called Think Global Online organizes free lessons and provides study notes and materials. Liko Education Online also provides free answers for students in grades 2-11 (Ministry of Education and Science of Ukraine, 2022).

At the same time, since the beginning of the large-scale Russian invasion, Ukrainian students from institutions of higher education have had ample education opportunities. Note that refugee students who have left Ukraine study on distance platforms from their own universities. Ukrainian students have the opportunity to improve their knowledge on the powerful educational resource “Coursera”, which has provided free access for Ukrainian universities to more than 3,500 courses (Ayoub et al., 2020).

It should be noted that the Ukrainian government after February 24, 2022, promoted the implementation of many projects to develop online learning. For example, in cooperation with the Office of the President of Ukraine UNICEF has created a free online platform called “United Ukrainian University”. The key goal of this project is to provide relevant educational skills for Ukrainian students in support of higher education. The United Ukrainian University is also dedicated to supporting all Ukrainian universities, primarily in order to develop them in a military crisis environment. A Ukrainian resource called

Prometheus also organizes many free educational activities for Ukrainian students. Consequently, there are many such distance platforms in Ukraine. At the same time, their main goal is to develop the education system suffering from war.

Note that since the beginning of the Russian invasion in February 2022, Ukrainian universities have switched to distance work. Teachers conducted their classes (lectures, seminars, and practical classes) on various remote platforms. We are talking about such resources as Microsoft Teams, Zoom, Google meet, etc. (Kem, 2022). Note that students have been familiar with these resources since the Covid-19 pandemic.

Science in Ukraine under conditions of military aggression: a historical retrospective.

The structure of the Ukrainian system of scientific institutions is not quite clear to foreign researchers. In the U.S. and European countries, scientific research is carried out primarily within the framework of powerful university centers, which form separate special structural units for this purpose. Under these conditions, students complete their internships, engage in experiments, and work on their own projects within the framework of the universities themselves. Ukraine inherited from the Soviet Union a complex system of interaction between high schools and academic institutions. Even today, despite the best efforts of the Ukrainian government and legislators, there is a clear divide between the educational work of universities, where professors and lecturers teach and train specialists, and scientific institutes focused on the realization of research. For a long time, both directions were developing in parallel, and scientific work was the prerogative of the National Academy of Sciences of Ukraine and other academic institutions. The problems of functioning of this powerful organization are obvious: the lack of financing, departure of the initiative, and talented personnel abroad (there was a particularly massive “brain drain” during the 1990s). According to the testimony of workers at the time, the salary of a qualified specialist reached $25-40 per month, but even such a pittance the state was not able to pay.

At the beginning of the XXI century. the situation with financing stabilized. A younger generation of specialists, who had completed their studies during the 1990s, came to work in the NAS of Ukraine. Thanks to this, the importance of Ukrainian science has grown. For example, based on the index of citations in the Elsevier Scopus scientometric database, it was found that the leading positions on these indicators during 2009-2015 were taken by representatives of the NAS of Ukraine. In particular, in the latest updated statistics for 2015, seven of the top ten most cited Ukrainian scientists worked in the system of academic institutions, and not in higher education (Herbst et al., 2022). In general, this trend is also characteristic of a broader sample - only 20-25 people from the top 100 are affiliated exclusively with universities, another 10-15 people mention a university and an academic institution as their place of work. Therefore, even based on this rating, we can say that the National Academy of Sciences of Ukraine, as an organizational research and scientific structure, has fulfilled its main mission, despite numerous difficulties.

A weighty factor that helped to partially overcome the crisis in the development of academic institutions was the traditional focus on applied science, especially those related to the sphere of defense. This orientation, inherited from the Soviet Union, left its mark on the development of the scientific sphere in academic institutions. In particular, after the start of Russian aggression in 2014, research institutes engaged in the development of combat systems received additional funding. It should be noted that the main customer, Ukroboronprom Concern, did not buy Ukrainian weapons on a serial basis. The unclear reasons for this decision will be the subjects of separate studies if the information appears in the public domain (i.e., is not classified). At the same time, after February 24, 2022, the weapons developed by Ukrainian scientists demonstrated their effectiveness. The Stugna-P anti-tank missile system is effective against Soviet tank models in service in Russia The Neptun missile system hit and sank the flagship of the Russian Black Sea Fleet “Moskva”, the Bogdana self-propelled howitzer on a vehicle chassis took part in the liberation of the Snake Island.

However, the industrial implementation of the developments of Ukrainian scientists is still out of the question. On the contrary, thanks to the budget sequestration, the maintenance costs of the National Academy of Sciences of Ukraine have been significantly reduced, which again aggravates the problem of financing the institutes. As of June 2022, there has been renewed talk about the future of Ukrainian science, connected exclusively with the university centers. There is no talk of liquidating the National Academy of Sciences of Ukraine or merging it with universities, although such development trends will again lead to “brain drain” and retraining of scientists. Russian aggression has inflicted tangible material losses on scientific institutions. Back in 2014, the opportunity to cooperate with scientific institutions in Russian-occupied Crimea and in the separatist-held regions of eastern Ukraine was lost. After the beginning of the storming of Kyiv and especially Kharkiv, scientific institutions were hit hard.

Ways to overcome the crisis in the Ukrainian scientific structure also depend on cooperation with foreign institutions. In the modern scientific space, there are almost no national borders, so Ukrainian scientists will have to look for additional grants to continue their work on their own. Note that after February 2022, foreign research centers and scholarship foundations expanded their cooperation with Ukrainian institutions, providing additional assistance to scientists from the affected regions of Ukraine. We believe that due to the expansion of such cooperation and stabilization of the financial state of the state we can talk about the possible restoration of the potential of the NAS of Ukraine and Ukrainian science in the near future.

5. Conclusions

So, it has been established that one of the most global challenges to Ukrainian education and science has been the COVID-19 pandemic. Globally, the pandemic has led to a decrease in the quality of education and increased financial costs. For example, in early 2020 the financial gap to achieve sustainable quality education in low-income and lower-

middle-income countries was about $148 billion. The pandemic has increased that figure by a third. In Ukraine, the vulnerability factor - the low level of digitalization of education - has come to the fore. Disruption of work processes made it difficult to implement internship and on-the-job training programs. We believe that in order to guarantee equal and inclusive education, it is crucial to provide a higher level of training and support for teachers and communities. At the same time, the implementation of digital solutions requires appropriate information content, methodological models, effective teaching methods, etc. Since February 24, 2022, the Ukrainian government has promoted many projects for the development of online learning. Since the beginning of the Russian invasion, Ukrainian universities have switched to distance learning. Teachers conducted their classes (lectures, seminars, practical classes) on different distance platforms. The situation was made easier by the fact that students have been familiar with these resources since the COVID-19 period.

At the same time, the Ukrainian scientific sphere has inherited a serious drawback from the Soviet times - a clear structure that distinguished it from the educational sphere. That is why the NAS of Ukraine developed separately from the globalization trends in Ukrainian higher education. At the same time, as shown by a study of the citation index of scientists, the most cited researchers work at institutions affiliated with the NAS of Ukraine. The war of 2022 demonstrated the government's willingness to sacrifice funding for science, the military development of which proved almost unnecessary. It should be noted that the way out of the current crisis may lie in closer cooperation with Western grant and research centers - thanks to additional funding, Ukrainian science will not only retain its potential but will also develop under extremely difficult political conditions.

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