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Educational trends 2022: essence and innovation potential

Tendencias educativas 2022: esencia y potencial de innovación

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Abstract

The paper aims to analyze the educational trends of the year 2022 and determine whether they are relevant in the future, whether they are a response to the challenges of the present. Also, attention is paid to the method of SWOT-analysis, with the help of which the strengths and vulnerabilities of distance learning are identified. The results analyze the future of distance education, in particular, special attention is paid to the experience of implementing hybrid education as a likely promising direction of further learning. Another aspect is the introduction of STEM education, media education (as a counteraction to intentional propaganda), and Education for Sustainable Development as important elements of the modern learning process in the United States and European countries. In conclusion, it is concluded that these areas of educational activities will be trends in the next decade in the recurrence of the crisis. The scientific novelty of the work consists in the fact that for the first time at the synthetic level modern educational trends were studied, their prospects and risks of use were characterized.

Resumen

El objetivo del artículo es analizar las tendencias educativas del año 2022 y determinar si son relevantes en el futuro, si son una respuesta a los retos del presente. También se presta atención al método de análisis DAFO, con cuya ayuda se identifican los puntos fuertes y los puntos débiles de la enseñanza a distancia. Los resultados analizan el futuro de la educación a distancia, en particular, se presta especial atención a la experiencia de la aplicación de la educación híbrida como una dirección probablemente prometedora de la enseñanza posterior. Otro aspecto es la introducción de la educación STEM, la educación en los medios de comunicación (como contrapartida a la propaganda intencionada) y la educación para el desarrollo sostenible como elementos importantes del proceso de aprendizaje moderno en los Estados Unidos y en los países europeos. En definitiva, se concluye que estas áreas de actividades educativas serán tendencia en la próxima década en la recurrencia de la crisis. La novedad científica del trabajo consiste en que por primera vez a nivel sintético se estudiaron las tendencias educativas modernas, se caracterizaron sus perspectivas y riesgos de uso.

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The abstract in English does not match the abstract in Spanish.

Key words: educational trends, distance education, innovations, media education.

Introduction

In the XXI century, the development of society has reached new horizons. Modern requirements for education must meet this process, as well as the current globalization trend and the total digitalization of all spheres of social life. At the same time, new challenges (in particular the COVID-19 pandemic and inciting military conflicts) increase the requirements for the organization of educational work, so for 2022, there is a need to identify and analyze the main trends that will determine the further evolution of the educational sphere. The relevance of this topic is also increased because among researchers no unified point of view or system of views on what the future, essence, and innovative potential of many current trends is, that is, whether they have future prospects for use, are only a short-term answer to urgent problems.

The development of the educational industry in relation to the latest global challenges remains a pressing issue. The available research is usually separate, i.e., it covers narrow, specific issues that are not addressed in a synthetic context. A comparative and detailed examination of emerging trends in the future of the industry remains an important element for subsequent elaboration and formulation of the necessary recommendations and conclusions for implementation.

Therefore, the purpose of the article is to determine the essence and prospects of modern means, technology, and trends that are used in 2022. Consequently, the paper highlights such research questions:

1. advantages and disadvantages of operating an online distance education system
2. the importance of lifelong learning for the self-development of individuals
3. the role of STEM-education and Education for Sustainable Development
4. characteristics of media education as a future educational trend.

The solution of these questions will make it possible to reinterpret some of the statements approved in the professional literature about the prospects of certain techniques or systems of

Palabras clave: tendencias educativas, educación a distancia, innovaciones, educación mediática.

education, as well as to offer our vision of future trends in the development of the educational sector.

Theoretical Framework or Literature Review

Currently, there are many works in which modern educators have tried to characterize the main pedagogical innovations and trends in the development of education. In particular, Conte et al. (2019) investigated the main ways of development of higher education, the authors characterized the possibility of using inclusive digital spaces, where knowledge is available to all regardless of social status. Abuhassna et al. (2020) investigated student satisfaction with online learning environments. They note that in order to understand, memorize, apply, and analyze course material, the learning environment should include certain factors. First, students should be given autonomy. Second, opportunities for collaboration are needed to enhance learning. Third, educators should be well-trained, knowledgeable, and supportive of students in their academic endeavors. Finally, students' experience with technology also plays a significant role in regulating the online learning environment system. Dhawan (2020) has characterized the use of distance education and explored its importance and role in today's information society. This researcher notes that in order for a digital learning system to be effective, various socio-cultural aspects of education must be included. De Souza et al (2020) investigated the development of education against the backdrop of modern technological change. At the same time, Ehlers (2019) characterized the qualitative changes in the education system of the future. Aghion et al. (2021) examined contemporary innovations in higher education. At the same time, Andersone (2020) characterized the main innovative methods of teaching and described their possibilities and prospects of use. Pinheiro & Santos (2022) analyzed the pedagogical conditions for the implementation of distance education, identified the features of its use. Kaur & Batra (2018) characterized the problem of the effectiveness of training to improve the performance of professionals in different industries. Instead, Bak

et al. (2019) identified the problem of social communication skills and their importance for today's students. Cherg & Davis (2019) investigated the problems of multiculturalism in the education system and formed key recommendations to reform multicultural education. Liao & Thomas (2020) explored contemporary ways to improve intercultural competence. Ungerer (2019) identified perspectives on using Storytelling to improve the learning system. At the same time, Richards (2019) analyzed the problem of cultural diversity in higher education and characterized conceptual pedagogy. Pérez et al. (2018) explored the prospects and possibilities of using play methodology as a major contemporary educational trend.

Consequently, although today there are many scientific works devoted to the main trends and methods of development (improvement) of education. However, the issue of efficiency of using these or those trends in the education system remains understudied. Also, little-studied is the prediction of the likely development of those or other trends that are now prevailing in education.

Methodology

The main empirical materials are the official ratings of modern educational methods, regulations on educational programs, and recommendations for the development of standards of higher education in Ukraine.

The theoretical pedagogical methods of research were used in the work: abstraction, concretization, comparison, and others. In particular, based on the method of comparison it was possible to compare the main trends in the development of education. With the help of concretization, the problem of using distance learning as a key trend in the world educational system is reflected. As a result of using abstraction, it was possible to move from general statements (coverage of the role of modern educational innovations and trends, identification of the main trends in education) to our own judgments on the effectiveness of using certain trends. Based on the predictive method the problem of using trends 2022 in the education of the future was characterized. The empirical methods include observation and experiment.

Separate attention is paid to the SWOT analysis method, which has been actively used in various fields of scientific knowledge since 1969. The main content of the method consists in a detailed

analysis of the identified factors, which are essential in decision making, it allows to formulate and characterize the prospects of development of a process, idea, or activity. It should be noted that originally this method was actively used in marketing studios, but nowadays it has shown its effectiveness in the educational system as well. So, since our study analyzes the main trends and tendencies in the development of education the requirement for an objective and balanced analysis is relevant.

Results and Discussion

Is distance education a major trend?

This is a debatable question the authors of the floor ask in order to determine the prospects of using distance education in the times after the COVID-19 pandemic is over. During the pandemic, distance learning was the main way out of the crisis situation in the education system (Arruda et al., 2021). In addition, online education is effective in crisis (military) situations. For this reason, the experience of Saudi Arabia, Palestine, and Ukraine, where military operations took place (or are taking place), is valuable. But will distance education be used in countries that have overcome the COVID-19 pandemic and are not suffering from the war in the future?

Let us note the gradual evolution of the legal framework for distance learning since 1996 when the term was gradually introduced into the legislation of European countries and America. Distance learning was used to increase access to education for the not-so-wealthy segments of the population, as the problem of tuition fees became very urgent (Abuhassna et al., 2020). It was normal for universities to offer distance learning courses as part of their bachelor's or master's degree programs. Initially, the period of expansion of distance learning since 1996 was led by the government. However, beginning with the start of the 21st century and the global development of the Internet, universities began working to expand their distance learning offerings. The real development of the legal framework occurred after 2017 when European countries accredited an institution specializing in distance learning (Arruda et al., 2021). Students who studied on campus and in online programs were declared equal. At the same time, institutions of higher education created digital libraries. The full transition to online learning took place in 2020 when all on-campus learning activities ceased and all classrooms moved to virtual platforms. The trends presented in the

data set are also confirmed by a study conducted by de Souza et al. (2020). However, these numbers do not reflect the equity or quality of education, as private educational institutions are mainly focused on increasing the number of students. Distance learning methods have already gained popularity in higher education institutions in many countries because of the legislative framework established decades ago. The pandemic has expanded the reach of distance learning when classroom instruction has moved into the virtual world (de Souza et al., 2020).

To predict the likely development of distance education, we will conduct a SWOT analysis of the effectiveness of educational resources in this type of training. The key criteria are chosen: financial resources: investments, financing, physical factors: space, equipment, location, human resources: teachers, technical staff, involvement of specialists, access to information resources (copyright statement, corporate access, licenses), analysis of different internal processes (organization of webinars, lectures, trainings, master classes, conferences), the possibility of professional development, availability of loyalty programs, etc. To identify the strengths of online learning in comparison with the traditional model, we use the SWOT analysis to determine what exactly its advantages are obvious (in the absence of a clear indicator, we interpret it as a weak feature). Consequently, according to the above criteria, we can determine the strengths (Strengths) of the use of online learning in higher education institutions.

Considering the factor “financial resources”, the use of online learning makes it possible to obtain grants from various organizations. By the factor “physical resources” distance learning does not require and does not depend on a significant renovation of the material and technical equipment of classrooms. For this reason, the BYOD (bring your own device) approach, which provides for the use of portable electronic gadgets by all participants of training (Conte et al., 2019), becomes especially important in educational institutions. Considering the “human resources” criterion, it is possible to significantly

expand the audience in case of attracting students from other educational institutions, it is also possible to invite “guest” lecturers or certain specialists in a particular industry (Abuhassna et al., 2020). According to the factor “access to resources”, the strength of the distance learning system in the structure of the educational process organization is the expansion of Creative Commons license opportunities. Analyzing the criterion “internal processes” is a valuable absolutely inseparable course of improvement of mastery (competence) of teachers and students on some procedural issues of blended learning application (Dhawan, 2020).

Let us define Weaknesses using online learning. Given the criterion “financial resources”, the use of this type of learning in higher education institutions is somewhat limited, primarily due to inadequate state funding of modern educational innovations. In the criterion “physical resources” there is a limited use of online learning in the absence of Internet access. Analyzing the “human resources” criterion, the need for systematic motivated self-education of both students and teachers becomes apparent. According to the criterion of “access to resources” the weak side of the use of blended learning can be the limitation of corporate access to resources. Considering the criterion “internal processes” the limitation of the teacher's independence in the educational process may become a weakness (Demiray, 2017).

In addition to the above-mentioned objective internal criteria, which can potentially be identified and controlled, uncontrollable external factors that can affect the development of innovation in different ways should also be taken into account. The mentioned external factors are: - variable trends and tendencies (integration of new educational technologies into the educational process, changes in methodological foundations, the transformation of target audience preferences; - relations between educational actors; - economic aspects: migration, competition; demographic aspects, political, economic, environmental, limitations.

Table 1.
SWOT-analysis matrix of the process of distance education implementation

Strengths	Weaknesses
Ability to obtain grants	Depending on Internet access
Lack of significant renovation of the material and technical base	The requirement in systematic motivated self-education of students and faculty
Expansion of the target audience	Becoming a limitation in the use of other online resources
Expansion of the Creative Commons license;	A methodological limitation of teachers' freedom, limitation of teachers' creativity
Improving the competence of distance learning participants	

Created based on the author's analysis

So, as we managed to establish in distance education, there are more advantages than disadvantages. However, the next stage of its mass implementation should take into account the above risks. We believe that the introduction of new learning resources and the improvement of existing ones will improve the distance education process as a whole.

Hybrid classes as a promising trend in the educational process

Some of the most recent advances in the educational system include hybrid classes, which are a mixture of online learning and conventional teaching. In hybrid classrooms, much of the learning takes place on campus or at school, and students participate in both in-person and online activities. Virtual analytics are used to assess student performance by collecting data on their interactions with instructional content (Dhawan, 2020). Pedagogical tools are developed based on new learning technologies. It is about combining game-based teaching methods with modern technology, from creating avatars or online characters to playing in fictional online worlds (Arruda et al., 2021). Many digital learning platforms are creating their own spaces to use and shape their participants. An extension of this is the creation of virtual reality, a digital gateway to the social online world. Regardless of the content of these advances, the digitalization of learning has spread. This means that the education system has moved to e-learning, and digital platforms are likely to remain part of the learning process. This method advances in ease of access and high levels of student and learner engagement (Ehlers, 2019). It also creates an environment where students can choose personalized educational tools and have more access to information. Moreover, they will use this access on their own, without coercion from teachers.

STEM-education and Education for Sustainable Development - the latest formulas for organizing the educational process

For a long time, Education for Sustainable Development has been a separate branch of educational activity, characterizing the vectors of its development, defining the tasks and methodology of general and accessible learning opportunities. Education for Sustainable Development formed a tangible evolutionary force because it redefined the approximate development of the entire field. Meeting such enormous challenges required the introduction of an updated and redesigned framework for teaching and education. In fact, it was not simply a matter of supplementing an already existing structure, but of thoroughly redesigning an already existing system of educational organization (Li & Lalani, 2022). Through this development, education for sustainable development has become an important and new learning system, the results of which have been repeatedly noted by experts.

We must agree with researchers who argue that the main distinguishing feature of Education for Sustainable Development is its proactive nature, the emphasis on the gradual formation of critical and systemic thinking in students and learners during their studies, and the consideration of local features of social development and transformation (Ehlers, 2019). At the same time, due to this specificity, even today there is no approved model of learning in the framework of Education for Sustainable Development. Accordingly, each region and each country has its own unique educational practices that take into account economic, religious, cultural specificities, etc. Such universality gives Education for Sustainable Development an additional bonus in today's multicultural society, which requires consideration of many aspects of the development of human communities (Pérez et al., 2018).

It is believed that education for sustainable development is most successfully applied in the pedagogical practices of a fairly limited number of countries, primarily from North America and Western Europe. For example, let us present a short list as follows: Finland, Canada, Netherlands, Sweden, Norway, etc. Overall, only one in three countries in the European Union takes full advantage of the new system. Educational activities here are characterized by the availability of national strategies, plans for education for sustainable development, a fairly extensive network of educational institutions, etc. Qualitatively using the advantages received, pupils and students formed their systemic values and necessary transversal skills in later life - manifested features of their personal development and integrated into society without a certain systematic range of knowledge and norms of behavior, outlined by teachers (Richards, 2019). At the same time, the teaching and learning support is at the highest level, used by the national language at all levels of education, comprehensively covering academic disciplines (Aghion et al., 2021).

Note that education for sustainable development is spreading rather slowly in many other regions of the world. For example, in countries of the post-Soviet camp, the rate of its spread is low. Local state budgets do not bear the burden of development of this trend, so the financial burden falls mainly on non-budgetary organizations, charitable foundations, grant support, etc. The post-Soviet space do not use common institutional and interdisciplinary approaches to the implementation of this sphere in educational institutions, often resorting to manipulation. In addition, the norms of this progressive methodology of organizing an entire educational sector are not supported by special training of teachers, heads of educational institutions, which is an urgent problem of educational sector reform in this region. The number of educational and methodological materials and scientific research, which would accelerate the implementation of Education for Sustainable Development in the region, is also insufficient.

One of the elements of this process is the use, implementation of ideas, and realization of the modern trend of STEM-education. In general, the definition of STEM is used to define an actual pedagogical direction that combines several elements in the world today: science, technology education, technical creativity, and mathematics (Andersone, 2020).

A key aspect of the application of this direction in the pedagogical process is the integration of the natural history component and the comprehension of innovative technologies. Note that such initiatives are often taken by universities on their own. The innovative potential of STEM thus develops in the field of education, given the level of interest in its implementation (Conte et al., 2019). However, we note that financial constraints can be an obstacle to such optimistic plans. So, we believe that STEM education technology should be widely implemented and applied in the future. Obviously, this trend will spread further and far beyond 2022, because the promise of this direction has been noted by many researchers.

Media education - a future educational trend?

Most experts consider digitalization, online learning, visualization, Education for Sustainable Development, prioritization, STEM education, and lifelong learning as modern educational trends (Andersone, 2020). However, less attention is given to media education, which is the integration of the latest technology into the educational process based on the application of certain techniques, leading to the realization of media literacy in students and even teachers (Richards, 2019). In an information-driven world, students need to possess critical thinking skills, rigorously evaluate and verify information, know about fake news, and ways to protect themselves from dangerous manipulations. The Russian-Ukrainian war (2014-until now) has demonstrated to the world the danger of information warfare because the propaganda of the Russian Federation has become widespread through global information channels. Consequently, media education, which contributes to the formation of media literacy, is especially relevant now. Accordingly, modern students should acquire skills related to working with media products. We believe that the principles of media education should be applied even in the elementary school system. Integrated media education will allow students to think critically, learn how to find and verify the information.

However, the appeal to media technologies in learning requires new approaches in teaching and perception of information, a restructuring of teaching ethics, and additional parental attention. The new educational goal of developing a modern feature from childhood offers new challenges for teaching staff and educators. We believe that media education in the future should

be one of the important educational trends to be used in the education system at all levels.

Conclusions

So, now as of 2022, there are several educational trends: distance education, STEM-education, Education for Sustainable Development, etc., which are actively being implemented in the European bachelor's training system. Distance education and digitalization of learning will be actively used in the educational system. As it was possible to establish although distance education has certain disadvantages, however, the development of the latest educational resources, improvement of existing ones can solve some problems.

A promising trend is the introduction of a system of hybrid classes, which is a combination of online learning and the traditional pedagogical model. In hybrid classes, we recommend implementing a combination of game and project-based teaching methods with modern technology. This means that the digitalization of the learning process will increase, so distance education will remain part of the educational process in the future.

The newest forms of educational process organization will be STEM-education and education for sustainable development. These trends are ahead of the curve, and the program learning outcomes include the formation of students' critical and systemic thinking. In addition, Education for Sustainable Development implies a lot of variabilities, which allows taking into account the peculiarities of national education systems.

We also predict that the future trend will be media education because it meets the requirements of the information society and modern challenges (however, hybrid warfare and the Covid-19 pandemic).

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