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## Modern education: key factor in global innovation in higher education

### Сучасна освіта: ключовий фактор глобальних інновацій у вищій освіті

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#### Abstract

The role of education in the educational space of a higher school is shown and it is measured as a aspect in the international procedure of informatization of higher education. The main features of modern society and the main trends that change the image of education are highlighted. The leading models of the educational progression as a factor of the global process of informatization of higher education, which are built based on network computer technologies, are considered. For quality education, the main criteria for selecting means of organizing the educational process are recognized; basic didactic and specific principles. Positive features of modern education are emphasized. Finding effective ways to improve higher education, is considered a factor of the global informatization process. A survey of students of various specialties in institutions of higher education was conducted to find out the key traditions of global quality training of future competitive specialists in the innovative process of

#### Анотація

Показано роль освіти в освітньому просторі вищої школи і розглянуто її як фактор глобального процесу інформатизації вищої освіти. Виокремлено головні риси сучасного суспільства та основні тенденції, що змінюють образ освіти. Розглянуто основні моделі освітнього процесу як фактору глобального процесу інформатизації вищої освіти, які побудовані на основі мережних комп'ютерних технологій. Для якісної освіти виокремлено основні критерії відбору засобів організації навчального процесу; основні дидактичні та специфічні принципи. Наголошено на позитивних рисах сучасної освіти. З метою з'ясування дієвих шляхів удосконалення вищої освіти її розглянуто як фактор глобального процесу інформатизації. Було проведено анкетування студентів різних спеціальностей у закладах вищої освіти для з'ясування головних шляхів глобальної якісної підготовки майбутніх конкурентоздатних фахівців в інноваційному

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higher education. The prospects for the growth of modern education and the ways and means of education, which allow for a complete restructuring of the educational sector, improve and even change the educational process, are considered. The essence of today's most accessible and effective online education projects is revealed.

**Keywords:** educational space of a higher school, innovative education, independent work, restructuring of the educational sector, technologies.

## Introduction

The progress of current technologies variations the image of the world and the dimensions of being in it, which are used to it, rapidly opens up inexhaustible possibilities and practically limitless perspectives: the worldview of people, the way of life, the system of individual values and social values, forms new relationships between man and the world, qualitatively different principles of activity people and organization of life (Abakumova, 2021).

The world public is talking about the necessary radical reform of the scheme of higher education, which exists today, at the threshold of the XXI century of the third decade, because the world educational space, at the moment, does not correspond to the new conditions of the existence of humanity. So, one of the burning, main, and important difficulties of modern education is the creation of a promising, modern, innovative education system capable of preparing the entire humanity of our planet for modern life in the conditions of post-industrial civilization (Stratan-Artyshkova et al., 2022).

Ensuring free and easy access to information from the entire world's educational space is the main feature of modern society. A real manifestation of modern civilization, which is shaping our future, is that the elements of the global infrastructure are currently functioning and shaping the modern world community.

Experience in the development of the global Internet network allowed the development and implementation of information processing tools and systems in the educational sector. The beginning of a new era allowed each user in such a network to perceive himself and be perceived by other individuals as an organic part of an innovative unified society.

A rather promising and important direction of the progress of the entire educational space should be the wide implementation of technologies and

процесі вищої освіти. Розглянуто перспективи розвитку сучасної освіти та шляхи, засоби форми освіти, які дозволяють повністю реструктуризувати освітню галузь, удосконалити і навіть змінити освітній процес. Розкрито сутність найбільш доступних і ефективних у сьогоденні онлайн-проектів освіти.

**Ключові слова:** освітній простір вищої школи, інноваційна освіта, самостійна робота, реструктуризація освітньої галузі, технології.

methods of self-education and distance education built on the use of promising and modern statement, information, means of remote access to distributed databases, digital technologies, knowledge of educational and methodological and scientific and technical information (Nychkalo et al., 2021).

Considering the serious and weighty contribution of the outlined problems, it is worth emphasizing that the innovative development of the system of higher education institutions of Ukraine is a controversial process and is insufficiently developed in the scientific and methodological aspect. In particular, today there is a ripe need for substantiation of ways to improve universal education under the conditions of expanding autonomy and decentralization of management of higher educational institutions. In this regard, in the article we considered the following aspects: the main trends that change the image of education; basic didactic principles on which pedagogical interaction is built with the aim of effective innovative learning; the main ways for a promising system of society to innovations; the essence of the most accessible and effective distance online education projects today is shown; the forms of modern education are characterized as a factor of the global process of innovativeness of higher education in the consciousness of remote space.

## Literature review

The theoretical analysis of the problem indicates a wide range of scientific investigations, the results of which serve as a basis for further research. The conceptual foundations of innovative educational processes are considered in the socio-philosophical context of civilizational changes, the justification of a new paradigm of education, and the search for ways to overcome its crisis state. I. Mala (2022) reviewed the structures and showed the spirit of distance learning as an effective tool in

organization education. The scientist finds out the advantages and problems, the main principles of distance learning; emphasizes the methods, pays attention to modes and forms of distance learning as an actual means of organization education; and analyzes the elements of distance learning. At the beginning of the 21st century, N. Nychkalo, N. Lazarenko, & R. Hurevych (2021) showed the methods of digitalization and informatization of education, related to digitalization and informatization of social processes. The beginning of the informatization of society was found out and the ways of its acquisition in recent years of a global character were revealed not only in the industrialized states of the world but also in many developing countries of the world community. Objects and results in the information society of the work of the majority of the employed population are information resources and knowledge. N. Bazyliak (2022) researched that the development of remote learning tools, global information networks, and mass communication caused the emergence of a new information society. The examples show the rapid growth of higher education institutions that use remote technologies without fail.

V. Yahupov, L. Petrenko, & S. Kravets (2019) proposed the conceptual principles of distance learning in professional and practical educational foundations for qualified workers, the concept of training qualified workers by distance learning was presented in technical educational institutes, the scientists substantiated the principles of distance learning and methodological principles in the scheme of specialized and technical education. O. Abakumova (2021) conceptually developed a version of reflection and presented distance education as a socio-cultural educational phenomenon of the modern world; researched the reconstruction of the history of the birth of distance education and presented a retrospective of the key stages of the creation of the phenomenon of distance education; the author's periodization of distance education is proposed; in the instructive space, the genesis of distance learning is reproduced and the deployment of actual distance learning of higher education seekers is shown.

We have set ourselves the task of finding effective ways to improve higher education, considering it as a factor in the global informatization process; highlighting the main features of modern society and the main trends that change the image of education; Consider the main models of the educational process, including in the distance format, as a feature of

the international method of informatization of higher education, which are built based on network computer technologies; identify the key norms for selecting resources of forming the educational process; basic didactic and specific principles; find out the constructive structures of modern education that show its character; to highlight features that contribute to the total procedure of informatization of higher education, make it perfect and innovative.

Issues of the development of the innovative potential of general educational institutions, in particular, the innovative competence of teachers as the main resource that determines the school's readiness to implement innovations, remain insufficiently covered. Mechanisms for forming innovative missions, strategies, and the environment of educational institutions require further development and roles in these processes of subjects of innovative activity. The difficulties that the pedagogical teams of schools constantly face when implementing innovations actualize the need for scientific, methodical and informational support for innovations.

However, despite the significant number of scientific works, the problem of innovative development of the teacher not only does not lose its significance, but also acquires a new meaning in the modern conditions of the development of national education.

The relevance of the research problem is also strengthened by a number of contradictions that exist in the educational space of Ukraine, namely, between:

- modern needs for innovative development of society and training of educational personnel for innovative activities;
- the objective necessity of active inclusion of teachers in the creative process, innovative pedagogical search, innovative activity and outdated forms of organization of the modern system of methodical work;
- the need for innovative development of teachers in the system of methodical work and the development of appropriate organizational and pedagogical principles for the implementation of this process.

Thus, the relevance of the outlined problem, its insufficient development in modern pedagogical theory and practice, the identified contradictions determined the choice of the topic of our article.

**The purpose of the article:** to demonstrate the role of modern education in the educational space

of a higher school and consider it as a factor in the global process of informatization of higher education.

### Methodology

To solve the set goal of the study at many steps of systematic research, a traditional of mutually agreed methods was used: general scientific methods of research – bibliographic (study of manuscripts, systematization of periodicals, scientific literature, etc.); concrete-scientific – synthesis, historical-pedagogical analysis, generalization (to reveal the features of higher education, its specificity, content and purpose to identify documents from the researched problem); semantic and terminological analysis made it possible to specify the main concepts of the study; historical-genetic – enabled the structuring of methodological bases of research, source base, historiography, contributed to the study of the genesis of innovative education in the educational space of a higher school; constructive-genetic determined the justification of the development of higher education as a methodological tool that allows characterizing the reception and perspective of the development of education; the conclusions were formulated and the studied materials were summarized by the method of interpretation; empirical methods – questionnaires, pedagogical observation, tests – to find out the key traditions of global quality training of future competitive specialists in the innovative process of higher education.

The research was conducted at the methodological, theoretical, and practical levels.

The implementation of the pedagogical experiment was carried out in three stages: preparatory, main and final.

At the preparatory stage, the purpose and tasks of the research were determined, the experimental plan was developed, methods of measurement and processing of results were selected, control and experimental groups were selected, and their homogeneity was checked.

At the main stage, an experiment was conducted.

At the final stage, the results of the experiment were analyzed, their reliability was confirmed, and conclusions were drawn about the pedagogical effect of the experiment.

The reliability and validity of the obtained results, the objectivity of their assessment was ensured by the methodological soundness of the

initial positions and the qualitative mechanism for evaluating the quality under study, the use of a complex of complementary research methods, and the involvement of a group of respondents from a higher educational institution in the analysis of its results.

To assess the homogeneity of experimental and control data, statistical processing was performed using MS Excel and SPSS (Statistical Package for Social Science).

In the informative space of a higher school, the theoretical level reflects the main principles of the development of education, the system of professional training of future specialists, taking into account world trends in the development of the educational field. The professional training of specialists in the educational space of a higher school is based on the technologies of innovative education, philosophical, psychological-pedagogical, and cultural principles, aimed at implementing the ideas of anticipatory development, and continuity based on personally oriented and systemic approaches.

The practical level made it possible in the educational space of the higher school to train specialists with the help of innovative education, the creation of an educational and methodological complex for those seeking education, and teachers of higher education.

The total sample size is 44 subjects. When forming the sample, the criteria of meaningfulness, representativeness, and equivalence were taken into account. The sample was formed by random selection using the technical procedure for calculating the selection step. The experiment consisted of four survey stages.

The experiment showed an undoubted dynamics of growth in the development of students' knowledge and skills in informatization, up to the consideration of ways of strengthening the main criteria for selecting methods for organizing the initial process.

### Results and discussion

*In modern conditions, education is considered the most central factor in the economic progress and social progress of mankind, because the individual himself is the main value of civil society, can master new knowledge, accept and find non-standard solutions* (Bazyliak, 2022).

The face-to-face and distance forms of education are relevant today, and distance education is not inferior to the quality of education, because, at a concrete practical level, technologies today have made the exchange of pedagogical experience of teachers a reality, improved collective development and contributed to the implementation of better educational and methodological and didactic work of the teaching staff, without leveling individuality, the need for strict unification, which destroy higher education. Following world educational standards, specialized distance education quality control is being developed and improved. Correlation of individual, social, public and personal, appropriate and desirable, normative and innovative in educational activity, the interaction of the learner and the teacher takes place during the acquisition of knowledge based on cooperation with the dominance of independence of the educational development. All this requires innovative modern education to recognize the presence of a significant humanistic potential, which should be fully actualized, constantly increased, able to be applied in time in education, and at the same time take into account the appropriateness of the schedule and distribution of study time, individual personal inclinations of the student. For innovative education of a higher school, it is necessary to take into account collective action and exchange of experience, the imperative of self-organized communities, mutual education, mutual learning through interaction and communication, diversity and continuity, accessibility and openness of education, equality of opportunities and rights (Abakumova, 2021).

In connection with the relevance of awareness for the current global process of informatization of the world, we, to the most important figures, have presented the following for a promising system of society:

- the advanced nature of the system of high education, its directness to the development of the creative abilities of people, the problems of future civilization;
- fundamentalization of the greatest illumination that can advance the essence of its quality;
- availability of a high-level education system for students based on promising communication, information, digital technologies for self-education, and a wide variety of distance education methods. Other factors that influence the entire system of great illumination can also be understood,

but it is important to overestimate the significance of the names.

The descendants of various countries are constantly thinking about the so-called synergy of technologies, a combination of digital innovative technologies (Mammadova, 2022). Let's take a look at the ways and methods that allow us to completely restructure the lighting system, improve, and finally change the lighting process.

The Internet of speeches can formulate ideas and decisions, allowing you to combine real, piecemeal intelligence with virtual light based on large amounts of data contained in IoT.

Virtual augmented reality allows for the creation of new light, rich in the production of greater illumination, and 3D robots and robotics allow more routine operations to be automated (Antón-Sancho et al., 2023).

In all areas of life and everyday life, information systems have advanced. A great range of possibilities is reflected in the development of digital technologies. In the light, dry gallus, in the industry, progress is being made with significant fluidity, not taking into account our hoarding and supply (Swiatek, 2023).

Digital technology in our time is a discrete system, which is based on methods of information transfer and coding, which allows many different tasks to be completed in a short period. The circuits and speed codes themselves were created by IT technologies, and the desktops required by the global process of informatization of global lighting, video, and digital technologies without any possible distance of lighting (Nychkalo et al., 2021).

To support modern education, as a factor in the global process of higher education innovation, higher education institutions can use freely distributed, free systems for creating distance courses such as Olat, ATutor, Moodle, and Ilias (Tang, & Shen, 2022).

We will reveal the essence of the most accessible and effective online distance education projects today:

- *Classtime*, a digital tool service that is convenient for teachers, helps to evaluate the success of a group of students and each student of higher education individually, and also allows you to conduct and create interactive online classes;

- *MySchool* is an online environment adapted for quality education for students, their parents, teachers, and heads of education departments. It unites all those interested in quality education in the learning process with the help of an online library with multimedia materials for higher education applicants, automation of the document flow of higher education institutions, notes for teachers from all disciplines, topics for all categories of future specialists with the inclusion of various SMS services ;
- *Learning.ua*, a digital online project with an emphasis on Common Core international education standards, which includes interactive interesting tasks and games for students and as a result of which students can acquire high-level knowledge;
- *EdERA*, a project that offers online education in the format of mass open online courses and includes interactive lectures, notes with explanations, and homework, provides the opportunity to communicate with other education seekers;
- *MiyKlas* is a platform with a wide range of tests and tasks, and educational materials that allow you to study disciplines in an interactive form (Hevko, 2020).

In modern education, as a factor in the global process of innovation of higher education, the active role of the teacher is significantly strengthened, since the teacher must monitor the knowledge level of the student, and make decisions about adjusting the educational program to best master the material. If necessary, the student of higher education can receive teaching advisory assistance, while communication can be through the Internet in online mode (Kravchenko et al., 2023).

Independent work of students, which organizes work and motivates independent expansion and deepening of acquired knowledge, is of great importance in modern education. The student acquires the ability and skills of optimal use of time, independent selection of information sources, the ability of personal and business qualities, and objective assessment of one's potential. The organization of online independent activities of education seekers requires skills in the use of innovative educational technologies, the implementation of which contributes to the formation of appropriate social personal qualities of the individual, stimulates the disclosure of internal reserves in students, and contributes to the performance of various social roles, interaction in a team, solving cognitive tasks, etc. In this approach, the most significant is the help

of the project method, cooperative education, and research-problem-based teaching methods (Vynnychuk et al., 2022).

The most influential and important factor for the effectiveness of a student's independent work is the awareness of the purpose of each specific task and performed activity (Karayel, 2023). The student must clearly understand the essence of the task and the concreteness of the final result, and the indicator of the highest educational level of the student of higher education and the development of his independence is the ability to independently formulate and realize the final and intermediate goals of the task (Mala, 2022).

Modern education is intolerable without the use of communication and information skills in all their forms, which provide an opportunity to create new forms of pedagogical interactions (Vizjak et al., 2023).

Let's name the main trends that are changing the image of education:

- the emergence of new communication opportunities that "compress" time and space and shorten the distance of social influence on education;
- transformation of education from a concentrated form of socialization of the individual into personal and social capital in the context of the significance of the growth of the methodology of cognition and acquired knowledge as a resource of social development;
- development of open education – forms of implementation of new innovative processes of self-education and education based on free and open access to educational resources;
- permanent review at all levels of the methods and content of education, due to the process of rapid informatization of society;
- informatization of education – the outline of modern computer technology into institutions, its use as a new innovative pedagogical tool and instant means of communication;
- replacement of the imperative "Education for a lifetime" with the imperative – "Education for a lifetime";
- globalization of educational processes – the formation of the world's single educational chronotope: space-time and the world education system (Abakumova, 2021).

Let's name the main didactic principles on which pedagogical interaction is built with the aim of effective innovative teaching.

It is appropriate to consider innovative education through classical well-known didactic principles – scientificity, problem-solving, accessibility, unity of educational, educational, developmental functions, consciousness, activity, consistency, systematicity, individualization, visibility, contextuality, the strength of knowledge, the applied orientation of professional training of future specialists in institutions of higher education (O'Sullivan, 2021).

The transformation of computer technologies into computer pedagogical technologies takes place in the context of the laws of didactics. The implementation of didactic principles in the formation of the information and educational environment of innovative education should be considered in the context of the global process of informatization of higher education, and the use of ICT in the educational process, which takes place within the framework of the concept of programmed learning (Hogan et al., 2022).

This approach formed several didactic principles specific to innovative education to develop the global development of informatization, in particular, these are:

- the priority of the didactic approach;
- standardization of the content of education;
- didactic substantiation of the expediency of using innovative ICT in distance education (Macias et al., 2021);
- the principle of individualization of didactic actions of education explorers;
- didactic integration and differentiation of educational materials for students;
- the principle of continuity of educational activity of education seekers;
- didactic substantiation of the original level of professional training of educational space applicants;
- the principle of personal orientation of educational material;
- the principle of openness of education with remote access to electronic resources (Hu et al., 2023);
- the principle of cooperation on a productive basis between teachers and students;
- the principle of taking into account the peculiarities of the psychological and pedagogical direction of the educational activity of the students of education with

remote access to electronic educational resources;

- the principle of educational reflection of the acquirers of the educational space (Gong, 2023).

The outlined principles of didactics of innovative education emphasize: the clear direction of electronic educational resources that are constantly being created and improved, the integration into the national educational space, the integration into regional information environments of higher education, the clear observance of the laws of pedagogical science, the principles of didactic design of various information educational facilities, on unified methodological approaches in combination with high-quality software and pedagogical tools, software and technical characteristics, modern computers and ICT (Yahupov et al., 2019).

The results of the first survey showed that the most important motivation for quality education of students is the use of informatization in higher education. Here, students consider the main motives of their future professional activity to be: professional and valuable (18.3%); social (15.6%); cognitive (13.4%), and then communicative and aesthetic. The most unpopular answer turned out to be utilitarian-cognitive (5.6%) and status-positional (6.5%). It should be noted that unconscious motives also have average indicators, this indicates that not all students understand the motives of informatization of higher education, ways of identifying the main criteria for selecting means of organizing the educational process; the application of the basic didactic principles of education and the distance format, how pedagogical interaction is built for the effectiveness of the educational process, the essence of the most accessible and effective online education projects today, etc.

When working on eliminating these gaps, the second survey showed the following results: professional-value motives (25%) have growth dynamics, which shows the positive influence of professional influence when studying all subjects of the work program, social motives are also preserved mainly with 15.1%. Traditional historical motives receive 13% out of 100, and cognitive ones show a decrease. The low percentage of answers remains due to status-positional and utilitarian-cognitive motives.

The results of the third survey, before studying the courses, where attention is paid to the motives of informatization of higher education, ways of

identifying the main criteria for selecting means of organizing the education; the application of the main didactic principles of education and the distance format, how pedagogical interaction is built for the effectiveness of the education, the essence of the most accessible and effective online education projects in the future professional activity, showed that professional and value motives (39%) receive a greater percent of all, traditional-historical and social motives moved to the second place with 12%. This distribution shows that after the professional courses of study, the students have already formed a stable position towards the assimilation of the informatization of higher education, ways of identifying the main criteria for selecting means of organizing the educational process; the application of the basic didactic principles of education and the distance format, the essence of the most accessible and effective online education projects today, they already firmly understand the role of ICT in their future professional activity. Social motivation says that students do not separate the knowledge they receive from their benefit to society.

The fourth poll showed a tendency to increase indicators in the professional-value (48.4%) and social (13.2%) motivational categories. This indicates an increase in students' understanding of the role of ICT and that the courses conducted were not without results – low indicators in the utilitarian-cognitive and unconscious categories of motives. The reduction of unconscious motives is a positive result for us, since the number of students who do not understand why they study the ways and motives of informatization of higher education, ways of identifying the main criteria for selecting means of organizing the educational process; the application of the basic didactic principles of education and the distance format, the essence of the most accessible and effective online education projects today, is reduced.

**Table 1.**  
*The result of the self-test of the CG and EG groups.*

Category of questions	A	B	C	D
Operating system skills	58,4	18,4	8,9	14,2
Checking the ability to work with a text editor; clarifying the essence of the most accessible and effective online education projects today	40	20	17,1	22,9
Spreadsheet skills	29,2	20	16,7	35
Skills in working with presentation programs	27,7	19,2	16,9	36,2
Database skills	13,3	8,3	6,7	71,7
Internet skills	20	12,5	13,3	54,2
Working with Images	19	15	12	54
Website construction	10,7	7,1	2,9	79,3

\*The table is compiled by the author

Below you can see the dynamics of the determination of motives from the first to the fourth survey. Thus, it has been proven that students' motivation to study ICT, informatization of higher education, to consider ways of identifying the main criteria for selecting means of organizing the educational process; to the application of the main didactic principles of education and the distance format, to the clarification of how pedagogical interaction is built for the effectiveness of the educational process, the clarification of the essence of the most accessible and effective online education projects today has a dynamically growing character, which is caused by the courses developed by us on the formation of readiness to use ICT and informatization of higher education in professional activities throughout life.

The second stage of the study was “Self-assessment”, where students assessed their knowledge before and after professional courses (before and after the 1st and 2nd semesters). The groups were divided into experimental (EG) and control (CG). Categories of questions from A to D.

Answer category:

- A – of course I know and can teach;
- B – I'll sit down at the computer and remember;
- C – I present in general terms;
- D – I don't know.

For the convenience of processing the results, the questions are divided into categories to understand which categories students have difficulty mastering. The numbers are given as percentages. The table of results before the experiment shows the initial level of knowledge and skills in information technology in two groups at once (CG and EG) since the results of the two groups were combined.

The table shows that in the first two categories, students rate their knowledge well, and then the categories below have poor results; the majority rate their knowledge of skills in working with databases, with images and building websites very low. This means that the emphasis on developing and teaching undergraduate courses should be on these categories.

Work was done to find effective ways to improve higher education, and it was considered a factor in the global informatization process. The main features of modern society and the main trends that change the image of education are highlighted. The key models of the educational process, including in the distance format, which are built based on network computer technologies, are considered. For quality education, the main criteria for selecting means of organizing the educational process are identified; the main didactic principles on which pedagogical interaction is built for the effectiveness of the educational process; several

didactic principles specific to education were formed. Emphasis is placed on the positive features of modern education, which show its character, and the features that contribute to higher education, making it perfect and innovative, are highlighted.

After the work was done, significant changes were observed in the EG. The percentage of students who think they have no spreadsheet skills is 3.3%, while those who have complete knowledge is 47.1%. The problematic categories of questions, in our opinion, were "Skills in working with databases" and "Building websites", to which, before we improved the courses, a large number of students answered "I don't know" and the percentage of those who did not know reached 71.7% (skills in working with databases ) and 79.3% (website construction). After studying the courses we improved, these figures dropped to 15.7% (database skills) and 20.7% (website building). A table comparing the two groups can be seen below:

**Table 2.**  
*Comparison between the two groups after the experiment*

Categories of questions	Before the experiment	After the experiment	
	In both groups	KG Group	EG Group
Operating system skills	58,4%	60,1%	68,2%
Checking the ability to work with a text editor; clarifying the essence of the most accessible and effective online education projects today	40%	41,3%	63%
Spreadsheet skills	29,2%	31,1%	53,1%
Skills in working with presentation programs	27,7%	41,3%	69,4%
Database skills	13,3%	20,5%	45%
Internet skills	20%	29,2%	57,1%
Working with Images	19%	32,3%	51,6%
Website construction	10,7%	17,3%	50,5%

\*The table is compiled by the author

Quantitative indicators are given only for answer category A (of course I know and can teach), since this category of answers provides more accurate data on students' opinions about their abilities and skills in working with information technology, including in a distance format, as a factor in the global process Informatization of high light.

The table shows that the percentage of those who believe that they know how to work with an operating system can work with databases, and images, and can create web pages increased in both groups, but in the EG group, the percentage increased significantly. For example, while the percentage of those who knew and could work with spreadsheets was 29.2%, after our work in the control group the percentage was 31.1%, and

in the experimental group 53.1, which is 22% higher.

For the purpose of our research, the methodology of R. Cattell was applied. After conducting an empirical study, the relationship between the personal characteristics of active students of student age was revealed. The data obtained according to R. Cattell's multifactor personal method correspond to the law of normal distribution, therefore, the method of one-factor variance analysis was used, which was used to calculate the level of significance of the differences between the obtained indicators in the two groups. The probability of disagreements was assessed by blocks of personal characteristics: communicative, intellectual, emotional (Ihorovich, 2018).

The experiment showed an undoubted dynamics of growth in the development of students' knowledge and skills in informatization, up to the consideration of ways of strengthening the main criteria for selecting methods for organizing the initial process; before the basic didactic principles of the education and distance learning format are established, before the directions on which there will be pedagogical interaction to ensure the effectiveness of the education process, taking into account the essence of the greatest available and Highlight the effectiveness of today's online projects. Thus, we can say with confidence that the work has been completed, both healthy and necessary.

### Conclusions

The role of education considered as a factor in the total development of informatization of higher education. The main features of the information society and the key trends that change the image of education are highlighted. The chief models of the education as a factor of the global process of informatization of higher education, which are built based on network computer technologies, are considered.

For high-quality education, the chief standards for selecting means of e-learning organization are highlighted; basic didactic principles on which pedagogical interaction is built with the aim of effective distance learning; and several didactic principles specific to innovative education were formed. Emphasis is placed on the optimistic structures of higher education, which show its character, distinguish features, and contribute to the worldwide development of informatization of higher education, making it perfect and innovative.

A survey of students of various specialties in institutions of higher education was conducted to find out the main ways of global quality training of future competitive specialists in the innovative process of higher education.

The prospects for the development of modern education and the ways and means of education, which allow for a complete restructuring of the educational sector, improve and even change the educational process, are considered. The essence of today's most accessible and effective online education projects is revealed.

The value of independent work in modern education is shown as a factor in the global

process of innovativeness of higher education in a distance format, which is a motivation for independent expansion and deepening of acquired knowledge.

Further research will focus on ways to update online distance education projects.

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