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## EDUCATIONAL ACTIVITIES IN THE CONTEXT OF THE REALITIES OF THE INFORMATION SOCIETY: PROBLEMS, PROSPECTS

### Abstract

The study aims to analyze key trends in the informatization of the educational space and assess further prospects for its functioning in the context of the development of the information society.

The research is based on systematic and comparative analysis and

The process of informatization of education in the context of global processes makes it possible to form a particular online (digital) educational space that eliminates national and territorial differences between states, thereby providing open and fast access to innovative educational resources from all over the world.

ICT educational resources provide an opportunity to address two of the most pressing challenges: to ensure continuity between all levels of education; to gradually address the “gaps” in digital literacy between the young and old generations, thereby realizing one of the essential values recognized by UNESCO - inclusive and continuing education/education throughout life.

*Keywords:* information society, informatization, educational space, ICT technologies, educational environment.

### Introduction

Modern society is involved in a general historical process called informatization. This process includes the accessibility of all citizens to sources of information, the penetration of information technology in the scientific, industrial, and social sphere, and a high level of information services. The processes occurring in connection with the computerization of society contribute not only to the acceleration of scientific and technological progress and the intellectualization of all human activity but also to the creation of a qualitatively new environment of the information society, which ensures the development of human creative abilities.

One of the priorities of the informatization of modern society is the informatization of educa-

tion, which is a system of methods, processes, software, and hardware integrated to collect, process, store, distribute and use information in its interests customers.

Information technologies provide the opportunity to:

- rationally organize students' cognitive activity in the learning process;
- to make learning more effective by bringing all kinds of sensory perceptions of the student into a multimedia context and arming the intellect with new conceptual tools;
- to build an open educational system that provides each person with his or her learning path;
- to involve in an active learning process a category of children with different abilities and learning styles;

- to use specific properties of the computer that allow individualizing the learning process and searching for fundamentally new cognitive tools;
- intensification at all levels of the educational process.

The primary educational value of information technology is that it allows you to create an infinitely more vivid multisensory interactive learning environment with virtually unlimited potential and at the disposal of the teacher and the student. In contrast to the usual means of education, information technology allows not only to saturate students with much knowledge but also to develop the intellectual and creative abilities of students, as well as the ability to independently acquire new knowledge and work with different sources of information.

In the XXI century, digital media are a natural medium for intellectual work in the same way that writing was centuries before. Therefore, much attention is paid to the informatization of education through ICT tools and integration with traditional education.

The development of digital technologies and the formation of elements of the digital economy ensures the state's competitiveness, increasing the standard of living and quality of life of citizens, economic growth, and modernization of the social sphere (Timmis & Muñoz-Chereau, 2022).

Digital technology is part of a new knowledge infrastructure that is now being rigorously integrated into everyday life (Corradini, Lodi, & Nardelli, 2017). This knowledge infrastructure represents "a robust network of people, artefacts, and institutions that generate and maintain the information resources people need" (Nguyen, 2019). For a new generation of digital natives, the Internet is becoming not just a source of information but also an area of entertainment, a field for acquiring new skills, upgrading skills, and building careers (Song, 2018).

Digital technology in today's world is becoming an increasingly influential participant in pro-

fessional and educational practices. As with the industrial revolution of the 19<sup>th</sup> century, the intense development of information and communication technologies is changing the specifics of activity in many areas of public life (Fenwick & Edwards, 2015).

Digitalization of education is an integral part of modern specialist training. These trends are associated with multiple increases in the importance and volume of information and an increase in the number of interdisciplinary research and projects. Surveys show that students today are aware of the need to improve their competence in the field of artificial intelligence, big data processing and analysis, and information and communication technologies. The transition to a digital society puts forward fundamentally new requirements both for new competencies of specialists and for the process of forming these competencies. Education-based on innovative breakthrough technologies of the future increases the "market value" of a specialist in the labour market (Murashchenko, 2017). In this regard, the need to implement and analyze new approaches in the education system and the transformation of existing forms, methods, and education technologies becomes especially relevant (Godoi, Kawashima, & Moreira, 2021).

The importance of social networks, virtual reality technologies, and Internet applications for today's youth encourages educators to use information and communication technologies for educational purposes. However, according to the study's results, the range of evaluations of the "usefulness" of digital technologies has a high level of differentiation among teachers. On the one hand, there is an understanding of the benefits of digitalization and the needs of young people to develop digital competencies, and on the other hand, there are ideas about the need to resist "predominant optimism about digital technology" (Burnett, Parry, Merchant, & Storey, 2020).

Critical analysis of the international academic discourse has established a shift in the focus of

scholars to consider the benefits of digital technology implementation in education (Berry, 2019; Cladis, 2018; Craciun & Bunoiu, 2019; Hawkins, Ratan, Blair, & Fordham, 2019). In particular, a review of Ukrainian and foreign studies concludes that there is a relationship between high student achievement and the use of digital technology.

Modern scientific discourse considers the dangers in which the practice of “live communication” between teacher and student disappears, and there is a need to analyze the “expediency” of the active use of information and communication technologies in the pedagogical context; emphasising situational factors that influence the successful integration of digital technology in the educational space (Gupta & Irwin, 2016; Čampelj, Karnet, Brodnik, Jereb, & Rajkovič, 2019).

That is why the academic discipline “Pedagogy and Psychology of Higher Education” was introduced in the professional training of master pharmacists. The teaching of this discipline takes into account the processes of European integration, reforming of native higher education, and the need for future masters in continuous self-education, which determined the relevance of teaching this discipline in the future. The content of the academic discipline reveals the specificity of problems and tasks of higher education, peculiarities of innovative educational processes, and pedagogical activity, which results in the formation of abilities and skills to plan self-educational activity and other pedagogical competence of the future master.

The purpose of the study is to analyze key trends in the informatization of educational space and assess the further prospects for its functioning in the context of the development of the information society.

#### Materials and Methods

Many processes in the communication society are in dialectical relationships and interdependence, and these relationships are complex and

contradictory. According to the author of this study, the use of historical and dialectical approaches (historical context of communication), as well as the unity of historical and logical elements of social interactions, have been thoroughly studied by B. Fleisch, S. Taylor, V. Schöer, & T. Mabogoane (2017) to analyze the phenomenon of communication society due to several factors (Sysoeva & Osadchaya, 2019; Prokopenko, Kudrina, & Omelyanenko, 2018):

1. a certain degree of the inertness of the communication society, its reluctance to fully perceive the products of scientific and technological progress (for both objective and subjective reasons);
2. developing and improving, the information society does not move in the direction of reducing all kinds of threats; on the contrary, the number and the intensity of such threats are constantly increasing. The information environment is in constant development; it moves, it is not static, and as a consequence, such an environment faces obvious vulnerabilities and risks;
3. excessive volume of information grows exponentially. This situation leads to the fact that a person is not ready to perceive it;
4. the parallel coexistence of two trends: the formation of a large number of databases (“big data”) with general information and, at the same time, the lack of relevant and valuable information;
5. irregular and unbalanced introduction of information technologies (for comparison: unlike electronic document circulation, paper document circulation has been developing for centuries). As a consequence, we face distrust in the process of implementation of e-government, as well as the provision of state and municipal services in electronic form;
6. digital technologies used to automate processes are not finished; they are in a constant process of improvement and replacement with the latest updates;
7. communication society in the context of



globalization raises the anonymity in networks and, in turn, identifies subjects of information relations to the level of a fundamental problem.

The central topic of communication relations (de Paula & de Miranda, 2021).

The effectiveness and prospects for the development/functioning of the information-educational space, in our opinion, directly depend on the implementation of three key areas:

1. development of global distance education using modern information and communication technologies (ICT-technologies);
2. expansion of international information cooperation in the fields of education and science through the UNESCO UNITWIN program and the global university network GUNI by the new Sustainable Development Goals - 2030;
3. wider distribution and development of electronic educational resources, including the development of online educational programs and courses, textbooks and manuals, as well as virtual standardization of educational processes aimed at increasing the level of so-called digital literacy to minimize the gap between generations in the adaptation and application of the latest ICT technologies in education (Prokopenko, Kudrina, & Omelyanenko, 2018).

The rapid development of information technology has a significant impact on the development of the educational system. It is Information Technology that makes knowledge and education much more accessible. Moreover, ICT technologies facilitate integration processes in education and accelerate the pace of the internationalization of education (Lacka & Wong, 2019). In addition, Information Technology has radically changed teaching methods (e.g., the computerization of the learning process), led to new forms of learning (e.g., distance learning) and the introduction of high-tech educational tools into traditional educational structures (e.g., online lectures). We should also note the emergence of

innovative educational disciplines (e.g., robotics, global educational marketing, information law, etc.) and new research areas.

The research is based on system and comparative analysis, dialectical methods, as well as methods of classification and generalization. Particular attention is paid to the system-functional approach, which allows for identifying and characterising the relationship between different levels of educational activities. The study is interdisciplinary in nature.

## Results

The interests of the individual in the information sphere consist in the satisfaction of all their possible needs - ensuring the right of access to information, the possibility of citizen participation in lawmaking, including through the development of mechanisms of e-democracy, the possibility of receiving state and municipal services in electronic form, as well as the realization of the right to education, etc.

The global information society acts as a platform for the development of both positive and deterrent factors: the first contributes to the realization of the whole range of individual interests, and the last hinders the development of the information society itself (in general).

The uniqueness of the virtual environment forces the subjects of information relations to adapt and look for ways and opportunities to exist in the conditions of "real life".

When discussing the possibilities of education through the use of the latest ICT technologies, it is impossible not to mention the internationalization of education (as a holistic system).

The internationalization of education is reflected in such forms of mutual cooperation as:

1. Individual mobility;
2. student or faculty mobility for educational purposes;
3. mobility of educational programs or institutional mobility;
4. the formation of new international standards

- for educational programs;
- 5. the integration of the international dimension into educational programs, and the international unification of educational standards;
- 6. Institutional partnership;
- 7. creation of strategic information and educational partnership.

The “boom” in cross-border education, in turn, has increased the number of countries in which higher education is becoming a mass phenomenon. In parallel, the use of new information and communication technologies is expanding; the position of the adherents of the concept of knowledge economy is strengthening; the internationalization of the labour market and the need for a skilled workforce are rapidly increasing.

Thus, there are now fundamentally new forms of internationalization of education, reflected in the movement of educational institutions and training programs across national borders. This phenomenon is commonly referred to as “transnational education”.

The mobility of educational programs can be interpreted as the creation of distance education courses by foreign educational institutions, the organization of educational courses or training programs by a national educational institution in partnership with foreign organizations, and the implementation of courses and programs by franchising.

The internationalisation process makes it possible to merge or integrate educational resources (significant when they are unavailable) to avoid duplication and/or excessive copying of research topics; it also greatly simplifies the identification of educational projects.

At the same time, the process of maximizing benefits for all participants in educational internationalization requires the recognition of foreign qualifications, which in practice implies the recognition of quality assurance systems.

For many years, distance education in various forms (from distance learning programs or open university formats to high-tech online programs) has contributed to the educational aspirations of

millions of students who could not attend face-to-face classes and courses at universities in other countries.

Applicants/students often have doubts about choosing higher education through distance learning because they are not clear about the pros and cons of this method of study.

It would be appropriate to highlight the following advantages of distance education:

1. It allows students to combine a possible job with their studies;
2. from a financial point of view, distance education is more profitable than full-time education (opportunity to save on tuition fees). In addition, many educational courses in a remote format can be provided free of charge with timely completion of online assignments, the answers to which are sent to the managers of the educational program by e-mail or through online chat);
3. use of the latest information technologies that increase the interactivity of training sessions and fill them with unique digital content (video presentations, promotional materials, interactive cases, 3D models, etc.), which facilitates a more detailed study of those issues that often remain untouched in the classroom format;
4. Distance learning saves you time. Students who do not have enough time for full-time study can apply for distance learning and complete an educational program virtually from the comfort of their own home;
5. when entering the second higher education or additional training programs, many people are psychologically “afraid” to return to the format of learning in a classroom or open classroom. Therefore, distance learning technologies form a comfortable environment for a person without interference. ICT technologies help us to remain psychologically stable to obtain new knowledge, not be afraid to skip some educational material because of possible noise in the classroom, etc. Thus, distance education “protects” the student from the impact

of the crowd.

6. accredited distance education programs are recognized by most employers, which allows a person to get, for example, a new speciality and a new job in a short period without fear that this format of education will be ignored by companies/employers.

Among the disadvantages of distance education, we would like to emphasize the following points:

1. Without professional faculty for personal interaction and classmates who could help by constantly reminding you of future tasks, the chances of getting distracted and not meeting deadlines remain quite high.
2. The presence of hidden financial costs. Although the cost of distance education programs is usually cheaper than a regular face-to-face program, there may be hidden costs.
3. The complexity of ICT technology. Overreliance on technology can be seen as a serious disadvantage of distance education, especially when the learning process takes place in an online environment;
4. A shortage of highly qualified teachers often hampers distance education.

It is necessary to ensure that electronic educational resources are focused on implementing educational goals without compromising the content and quality of the educational program.

Thus, e-learning resources allow:

1. to manage and administer the online educational program: Routine course administration (advertising classes, providing copies of the syllabus, assigning discussion sections, and receiving course news) can be performed and handled more efficiently through the course homepage, electronic discussion groups, and online mailing lists.
2. build and structure a base of sources for teaching and research: the Internet and CD media (USB/ Blue-Ray) provide a wider variety of primary and secondary sources (including visual and audio sources). Using these sources, students/students/interns can bring

their own evidence and arguments to lectures and discussion sections and conduct research and analysis on a broader range of research topics.

3. increase digital literacy through the preparation of educational projects and presentations: instead of reporting on traditional problem solving - tests and exams - students/trainees can do more independent exercises in the publishing sector, prepare an exhibition and poster presentations, group project presentations, and models, and develop learning modules and other materials for their peers. Web-archiving learning materials for multiple releases (this applies to graduate programs or courses) allows you to turn an online educational course or educational program into a stable, functioning, sustainable, and overall intelligent educational and outreach design.
4. enhance interactive lectures: a computer with presentation software can provide a single tool for filling lectures with graphic structures, photographic material, combined slides, statistical charts and tables, images, music, and even video clips. In addition to printing them out as handouts, you can save the presentation in the classroom/auditorium in a web-compatible format for later viewing and discussion.
5. to create an interactive online discussion and debate environment: electronic communication tools such as email, conference software, and online chat can initiate a wide range of topics/issues for discussion even before a face-to-face audience or in-person science conference. Forming an interactive online environment with the interests and ideas of the students themselves (students, course entrants, etc.) in mind.

Concluding our analysis of the process of informatization of education, we would like to give a practical experience of implementing ICT technologies in the educational process on the example of an innovative model of tutoring classes.

The fundamental principles of tutor-supported education classes are as follows:

1. The principle of information openness. Outwardly, a variety of educational forms and offerings does not guarantee the implementation of the principle of open education: the student must acquire a culture of choice and joint organization of different educational offerings in their own educational program to maximize the use of own different resources for the construction of their own educational program. The teacher's task within the framework of the principle of open education is to expand the educational space of each student, providing him with the most incredible variety of movement options for self-determination.
2. Students' ICT competence is formed in the application of information technologies at all lessons and in project activities.
3. The basis of open education is represented by an individual educational program (IOP), which is not related to a specific institution or standard, and at the same time, is tied to a specific student, a specific person.

The functioning of the tutoring department in a school differs by level of education. At the elementary level, the main thing is to keep the child interested in education. The tasks of the tutor at the elementary school stage are to manifest and embrace the cognitive interest of the younger student; to identify individual problems of the student; to teach students to learn with cognitive interest; to give recommendations on how to get the necessary information.

In higher education, the methodology of tutoring support is very complicated because now the tutor needs to build a support system for joint mapping of the educational quest. Competitive and communicative interaction with peers is crucial for high school students. Online (interactive) learning games and educational sessions as a form of tutor support at this stage allow the student to be active in order to understand their current opportunities and prospects for advancement

in education and career.

## Discussion

Trends in the academic literature include the prevalence of data control, digital registration, and the de-territorialization of education (Leschuk, 2017). Attributes of the new reality in the context of digitalization will be such phenomena as the "digital divide," "digital citizenship," and "digital socialization" (Gama, 2021).

Due to the actualization of these trends, the contradiction between the need of young people to develop their digital competencies and the awareness of the lack of knowledge and skills to use information and communication technologies in their academic life or in their professional future is of particular concern (Honcharova, 2019). According to scholars, the education system is fully responsive to the new contemporary challenges and trends associated with developing information and communication technologies.

Although digital technologies are universally implemented in the general and professional education system, they are considered only "additional tools". In the future, experts predict a change in this situation. The intensive development of digital technologies may "marginalize" or exclude the human factor and direct interaction from many spheres of social life, including education (Berman, 2017).

In the context of digitalization, educational electronic content, interactive forms of skills development (virtual reality, simulators, etc.), Networking and collaboration, and gamification methods are the basis for the formation and development of competencies. Formal and informal activities based on information and communication technologies, including digital interactive methods, game practices, and visuals, can facilitate learning and increase student motivation (Zolotukhina & Yalovega, 2020). Additional advantages of digitalization of education are: a personalized approach in the learning process to human needs and interests through the use of



artificial intelligence, building individual educational routes, increasing intensification of the learning process, differentiation of forms of teaching material and knowledge control, development of self-organization of subjects of educational space and formation of flexible mechanisms of student motivation. Analysis of the scientific discourse on the digitalization of education allows us to conclude

A comparative analysis of the conceptual positions presented in the scientific literature allowed us to identify several bipolar trends in the digitalization of education. On the one hand, the availability of library resources, electronic content, and lecture materials of the world's best teachers creates the conditions for quality education, regardless of students' income or place of residence. On the other hand, according to experts, only a part of the population with digital literacy and Internet skills can benefit from digitalization. Moreover, scientists link the development of information and communication technologies with the formation of a new digital divide. The growing labour market demands on the skills and competencies of individuals in a digitalized environment reduce the competitiveness of young professionals who lack the material and financial base to build them. In addition, the lack of digital literacy shortly can be seen as a significant obstacle to providing educational services (Karnaukhova & Samchenko, 2018).

The level of digital competence of teachers, their motivation, and readiness to implement digital technologies are some of the most necessary conditions for the successful use of digital technologies in the educational space. It is the figure of the teacher who is the central link and conductor of the transition from the declaration of the ideas of digitalization of education to the actual implementation in school classrooms or university lecture halls. Without the active involvement of the teaching community in digitalization processes and their interest in the success and productivity of digital learning, the risks of imitation of activities in this area and the primitivizing

the goals and objectives of digitalization are actualized (Bilousova, 2016). Factors that increase teachers' effectiveness in developing their digital competencies include: involving experts in curriculum development (Borovoi & Vlaev, 2015); making them relevant to regional educational systems (Ma, Vachon, & Cheng, 2019); building teacher loyalty to digital adoption (McGovern, Moreira, & Luna-Nevarez, 2020); developing sustainable organizational relationships (Casillas Martín, Cabezas González, & García Peñalvo, 2020; Selwyn, Pangrazio, Nemorin, & Perrotta, 2019); resource and staffing support for teacher training (McLay & Renshaw, 2019). Monitoring and moderating electronic content and fixing technical problems can be seen as factors for the successful digitalization of education. Despite a significant lag in the development of teacher digital competencies, the issues of developing teacher readiness to use digital technology in the educational process and overcoming essential stereotypes remain understudied.

Critical analysis of publications on this topic allows us to identify the possible of digitalization of education: displacement from the educational space of experienced teachers with insufficient digital competencies; information overload, increased cognitive distortion, imitation practices, deepening of the digital divide, and transformation of criteria for teacher performance evaluation. In addition, the problems of building interpersonal communication competencies, students' analytical skills, dehumanization, and formalization of learning, and narrowing the boundaries of direct interaction between teachers and students have a high degree of urgency. In addition to this, F. D. de Paula and M. C. R. de Miranda (2021), in their study, reveal the factors that determine the decline of students in the context of digitalization of education:

1. Dysfunction of motivation. The development of "digital dependence" on outdoor information. Decreased motivation to accumulate knowledge in the context of their wide availability in the online space. Lack of knowledge

(students are sure that there is no need to memorize anything, as all the information is on the Internet) does not allow them to form appropriate competencies.

2. Dysfunctions of knowledge control and assessment (tests are seen as a single and universal evaluation mechanism). In addition, the digitalization of education significantly increases the burden of independent learning of educational material. The insufficient level of media competence of today's youth shifts the focus of training toward eclecticism; there are risks in the issues of evaluating the "necessary" information and the "best" source of information.
3. Communicative dysfunctions in the learning process: socio-psychological problems in communication, insufficient level of development of competencies related to teamwork, solving problems of interpersonal and intercultural interaction
4. Dysfunctions of "Internet education" (freedom of choice of information sources, risks of manipulation, and distortion of information in the Internet space can negatively affect spiritual and moral aspects of personality development, civic identity, value orientations, and beliefs).

The transformation of the identity and moral attitudes of young people is related not only to the processes of globalization and the dominance of the values of the consumer society but also to the new risks of digitalization.

The large-scale transfer of civic and political practices to the online space, the mobilizing power of the Internet (Kumar, Martin, Budhrani, & Ritzhaupt, 2019), along with factors such as the risks of information distortion and the possibility of manipulation of public consciousness, make new demands on the educational institution. In the context of digitalization, pedagogical practices must ensure the formation of personal media competence and citizenship.

The authors refer to the ideas identified by Ch. Lim and B. Kye (2019), in which digital

technology is a necessary but insufficient condition for improving the quality of educational and educational work. The effectiveness of the educational process is determined primarily by the activities of teachers and the practice of their direct interaction with students. In today's environment, digital technology should be embedded in the educational space but not supplant traditional forms of learning. A reasonable combination of digital and traditional pedagogy will allow us to appropriately respond to the challenges of the time in education and prepare competitive professionals (Berry, 2019).

Critical analysis and synthesis of the results of scientific discourse on the implementation of digital technologies in the educational process allow us to formulate several principles that increase the success of the process of digitalization of education while reducing its negative consequences:

1. Formation of institutional conditions that ensure the effectiveness of the implementation of digital technologies in the educational space. In this context, the predictability of management subject, actualization, and popularization of education reform in the pedagogical community are fundamental. Institutional conditions can be divided into formal and informal. Formal conditions include resource support for the introduction of digital innovation, normative requirements for pedagogical activities, and the use of digital technology to enrich the learning process, assess students' knowledge, and increase their interest in learning. Informal conditions include legitimization and dissemination of digital society values and support for pedagogical practices based on recognising the "usefulness" of digital technologies. It is about the formation of socially approved models of behaviour, about the orientation of teachers to find new solutions to optimize the educational process, and about the increase of young people's interest in learning in the context of digitalization. The system of motivation and incentives can

become an essential factor in providing material and moral support for teachers who effectively use information and communication technologies in the educational process and who are ready for self-education and self-development in the context of digitalization.

2. Consideration of situational factors. Situational factors determine the level of compatibility of digital innovations with the actual situation in a particular educational organization and the interests of the main subjects of the microenvironment, as well as with the broader context of socio-cultural and economic conditions of social development. Cultural norms challenge educational technology (Ma et al., 2019). Innovative managerial practices gain permanence when anchored in the organisation's activities and the skills of the main actors of the educational space. Internal organizational factors include the needs and requirements of students, technological potential, objective (digital readiness, skills), and subjective (readiness, motivation to work in the digital environment) capabilities of the teaching staff. This principle implies maximum consideration and compliance of methods and forms of digitalization of education with the specifics of the educational process in a particular educational organization, the actual situation of professional activity in terms of its subject and social content.
3. Resource provision of practical implementation of digital technologies in the educational space. According to P. P. C. Cardoso, L. A. Araujo, and C. R. M. Giroto (2021), potential prerequisites for implementing progressive innovations face resource and organizational and managerial constraints. The adaptability of subjects of educational space to the new requirements of digitalization is determined by technological, infrastructural, and methodological support for the formation and development of the electronic environment. Resource support for the digitalization of education includes the following elements: infor-

mation and communication infrastructure, organizational support from management and IT specialists, a system of continuous education, and tutor support for professional activities.

4. Priority of personal interests as a critical criterion of efficiency of digitalization processes; creating conditions for successful socialization and disclosure of students' potential in the electronic educational environment. Subject-oriented approach actualizes the practice of cooperation and teamwork. The development of strategies for the digitalization of education should be based on consolidating the interests of the professional teaching community and the needs of students. The contradiction between the need for digitalization of education and the existing goals and insufficient readiness of the pedagogical community to use digital technologies can be compensated by prioritizing active and self-directed actions of the subjects of educational space and the development of digital trust.
5. Integration of the concepts of digital and traditional pedagogy. Even in a digital environment, the teacher's role cannot be limited to supporting teaching aids. Communication between the teacher and the student is meaningful; it allows for the formation of analytical and communicative skills. Traditional pedagogy ensures the realization of the educational function and creates conditions for the socialization of young people. In the conditions of modernization of approaches to education (from the paradigm of knowledge formation to the paradigm of competence formation), traditional pedagogy methods will become decisive in training a competitive specialist.

### Conclusion

The process of informatization of education in the context of global processes allows the formation of a particular online (digital) educational space that eliminates national and territori-

al differences between states, thereby providing open and fast access to innovative educational resources from around the world. Educational ICT resources, in our opinion, provide an opportunity to solve the two most urgent tasks:

1. ensure continuity between all levels of education;
2. gradually bridging the digital literacy “gaps” between younger and older generations, thus realizing one of the essential values recognized by UNESCO and the UN as a whole - inclusive and lifelong learning/education.

Pedagogical innovation in the system of training master’s degree is based on the use of innovative technologies (both pedagogical and information and industry pharmaceutical technologies) in educational processes to improve their effectiveness and quality assurance.

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