THE EVOLUTION OF DIGITAL LITERACY OF EDUCATION BLOWERS: CHARACTERISTICS OF DIGITIZATION PROCESSES

A EVOLUÇÃO DA ALFABETIZAÇÃO DIGITAL DOS SOPRADORES DA EDUCAÇÃO: CARACTERÍSTICAS DOS PROCESSOS DE DIGITALIZAÇÃO

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ABSTRACT

The article reveals the essence, content and structure of digital culture of undergraduate students, psychological and pedagogical features of its formation in the information and educational environment of the university. The model of the pedagogical system of formation of digital culture of undergraduate students in the information and educational environment of the university is developed and substantiated. The methodology of formation of digital culture of undergraduate students in the information and educational environment of the university is compiled. The effectiveness of the model of pedagogical system of formation of digital culture of undergraduate students in the information-educational environment of the university was checked in the process of pedagogical experimente model of the pedagogical system of formation of digital culture of undergraduate students in the information-educational environment of the university on the basis of the developed criteria of effectiveness and the compiled methodology.

Keywords: educational environment, management, control, information environment, digitalization, communications.

RESUMO

O artigo revela a essência, o conteúdo e a estrutura da cultura digital dos estudantes universitários, as características psicológicas e pedagógicas da sua formação no ambiente informativo e educativo da universidade. O modelo do sistema pedagógico de formação da cultura digital dos estudantes universitários no ambiente informativo e educativo da universidade é desenvolvido e fundamentado. É compilada a metodologia de formação da cultura digital dos estudantes universitários no ambiente informativo e educativo da universidade. A eficácia do modelo de sistema pedagógico de formação da cultura digital dos estudantes de licenciatura no ambiente informativo-educativo da universidade foi verificada no processo de experimentação pedagógica do modelo de sistema pedagógico de formação da cultura digital dos estudantes de licenciatura no ambiente informativo-educativo da universidade com base nos critérios de eficácia desenvolvidos e na metodologia compilada.

Palavras-chave: ambiente educacional, gestão, controle, ambiente de informação, digitalização, comunicações.

Introduction

In the light of positive trends and existing challenges, special attention should be paid to the training of university graduates. The success of the digitalisation of the economy and social sphere and the improvement of the quality of human life depend on their confident and competent application of information competencies in their professional activities.

It is worth noting that the state standards of higher education generally orient universities towards the formation of information and communication competences in future bachelors, as they are necessary for a specialist of any profile. However, the results of ongoing research show the presence of consumer attitude of undergraduate students and young specialists to information and communication technologies.

Bachelor's degree students and young specialists to information, the prevalence of reproductive nature of information processes, insufficient attention to the ethical aspects of interaction in the digital environment. This is caused by the insufficient level of digital worldview and knowledge about the possibilities of information resources. There is also poor mastery of the skills of searching, analysing and synthesising digital data and transforming them into knowledge.

Consequently, it is important to teach future specialists not just the skills to work in the digital environment, but also to develop a digital culture necessary to

improve the quality of their future professional activities. A university graduate should understand the leading trends in the digital transformation of the economy and culture of society; possess productive information and communication technologies for learning and building a digital culture (Mills, K. A., 2016).

In addition, it is worth noting that the opportunities and pace of digitalisation often outpace the skills of users to master them. Cardinal changes are already taking place in higher education: inter-organisational forms of education are developing; online technologies and forms of distance learning are becoming part of the educational process in universities; opportunities for open access to scientific and professional libraries and databases are expanding; electronic educational environment is being formed. This necessitates the need to comprehend and systematise new opportunities of the information and educational environment of the university for the formation of digital culture. In the aspect of the problems under study, it becomes relevant to study the ways of supporting value-oriented professional education, identifying ways to increase interest and motivation to study professionally-oriented elements of the digital environment, pedagogical justification of the inclusion of information resources in the educational process, elaboration of ethical aspects of e-learning, development of appropriate methodological support, etc.

These grounds allow us to assert that in modern pedagogical science there is a socially significant task associated with the comprehension, development and testing of the pedagogical system of formation of digital culture of undergraduate students in the information and educational environment of the university environment.

Scientific novelty of the study:

1. The possibility of using the potential of digital information and educational environment of the university and e-learning tools for pedagogical support of the process of transformation of elements of digital literacy and information and communication competences of students into personal and professional quality 'digital culture' is proved. The role of mastering by undergraduate students of cognitive, procedural, value and attitudinal aspects of digital culture in improving

the quality of information processes and strengthening the competitiveness of graduates in the labour market in the conditions of digital economy development is shown.

2. The model of the pedagogical system of formation of digital culture of undergraduate students is designed. The description of the target and theoretical and methodological components of the model allows us to attract scientific and pedagogical methodology and formulate the principles of the process under study. Characterisation of the content, procedural and subjective components demonstrates the possibilities of including the resources of the information and educational environment in the educational interaction between teachers and students. The presentation of the evaluation and result component provides stability of the results. Identification of the prognostic component is aimed at taking into account the prospects of personal and professional development of students in the system of continuing education and future labour activity.

3 The pedagogical conditions are characterised, the basis for determining which is the focus on expanding the possibilities of practical application of the components of the information and educational environment of the university and professionally-oriented digital resources in the formation of digital culture of undergraduate students. The identified conditions contribute to the enrichment and provision of flexible use of forms of pedagogical interaction, methods of access to educational and scientific-professional means of support for cognitive, research and educational-practical activities of students.

4. The methodology for the formation of digital culture of undergraduate students in the information and educational environment of the university is developed. The components of the methodology describe the objectives, content, sequence, organisational measures, digital resources and monitoring tools used in during the study of general professional and professional disciplines.

In the course of the study, a set of methods was used to support the realisation of its objectives at all stages of methods that supported the realisation of its objectives at all stages. The following methods were used to substantiate the theoretical results methods: analysis of a wide range of scientific literature,

periodicals and electronic resources; study of normative documents and methodological support supporting the development of information society and digitalisation of education; generalisation and modelling education; generalisation and modelling. To solve the problems of experimental work, empirical methods were used: questionnaires, testing; study of methodological support for professional training; analysis of empirical data and their statistical processing.

In the context of the ongoing research, publications reflecting the perceptions of information and communication competence of students and current professionals are of particular interest. It can be argued that this aspect is well enough studied. Formation of ICT-competences of teachers and students of various training areas of teachers and students of different areas of training are devoted to the following studies D. Bawden (2001) and A. Martin, have attempted to bring analytical order to the discourse by writing comprehensive reviews of the concept of digital literacy and its relationship to other concepts such as information literacy, library literacy, media literacy and computer literacy. literacy (Lau, 2006). D. Bawden (2008) notes that there is an observable continuum from early mentions of computer literacy and the subsequent emergence of new forms of literacy from information literacy to internet, web and digital literacy.

Proliferation of competing definitions and inconsistent references to different types digital literacy is problematic. The roots of a variety of interpretations are possible trace from the very concept of literacy. P. Gilster's idea about literacy is possible seen as a relatively straightforward extension of the traditional idea of literacy as an ability reading and writing – dealing with information using a traditional set of modern technologies (Bawden, 2008). It is worth noting that various aspects of information and communication competence are an important component of digital culture, but are only focused on the technological side of the problem. From this point of view, of particular importance are works that aim to studying the process of origin and formation of personal information culture as an aspect of professional education. The following publications are devoted to this problem (Rheingold, 2020) or participatory literacy (Giger, 2006). H. Rheingold (2020) also highlights, in addition to attention, other 4

areas of literacy (participation, collaboration, network awareness, critical consumption), but believes that attention is fundamental for all other forms of literacy, the one that unites all others. He emphasizes that if to talk about the critical use of digital media, one needs to learn be smart about directing your attention online. After all, attention is the main building factor a building block of how people think, how they create tools, and how they teach each other use them, how groups socialize, and how people transform civilizations.

P. Giger (2006) notes that participatory literacy means learning to share and participate in the native world of the Internet, where participation and sharing will become an important feature of our lives. It also means being equally adept at sharing your knowledge and allowing others to share their knowledge with you, which also includes knowing when it is safe to share and when it is not. Everything between these polarities requires a certain amount of knowledge about how to share and participate in the web environment. This knowledge along with firewalls, spyware detectors and antivirus software will henceforth become necessary components of our lives.

Participatory literacy requires certain knowledge of ironic communication, hybrid identity and a sense of belonging to the contextual environment, it is learning live in the Web 2.0 / Native Web environment, which are participatory networks (Thomas, D., & Brown, J.S., 2011).

Various aspects of the development of information and communication competence are presented in the authors' studies: (Prensky, Marc, 2001, 2010) proposes specific methods and strategies for implementation in the context of digital literacy.

The study of the conceptual apparatus, structure and content, composition and technology of formation of ICT competence is reflected in scientific works: (Tapscott, Don,2008) explores how "Net Generation" uses technology for learning, communication and development, (Turkle, Sherry, 2011) looks at the influx of digital technologies into mutually exclusive and special developments, (Mills, Kathy A., 2016) the book takes a theoretical view of digital literacy, discussing a variety of approaches to understanding how people consume and consume digital content.,

(Thomas, Douglas, and John Seely Brown, 2011) the authors look at how the rise of digital technologies and open source information is creating new opportunities for advancement., (Warschauer, Mark, 2004) the book focuses on the role of technology in changing social dynamics, through the increased availability of lighting and information, (Lankshear, Colin, and Michele Knobel, 2008) the authors discuss the concept of digital literacy in the context of current social and cultural practices., (Jenkins, Henry, et al., 2009) the book explores how digital culture is shaping new kinds of literacies that are necessary for effective interactions in the modern world.

The publications focus on the study of value, motivational, cognitive, communicative, creative aspects of information culture, emphasising its importance for the formation of professional outlook of a future specialist (Tsilmak, O., Iasechko, S., Poplavska, M., Motlyakh, O., & Kabanets, O.,2022).

Despite the presence of significant grounds, the holistic system of forming a student's digital culture in the educational space of the university has not been developed at present. Also, the methodological support for the use of the potential of modern digital resources and information and communication technologies to support students' educational and self-educational activities is not widely presented in the scientific literature. For example, the issues of using the potential of professionally-oriented social networks to stimulate students' interest in educational and research activities are not covered, technologies of forming the basics of digital etiquette in students through online communications are not investigated.

Accordingly, it is legitimate to speak about the presence of contradictions:

- between the increasing requirements for professional activity in the conditions of digitalisation of the economy and the insufficient level of formation of the bachelor students' culture of implementing productive information and communication processes in the educational and professionally oriented digital environment;

- between the need for scientific substantiation of the improvement of personal and professional qualities demanded by the digital economy in undergraduate students and the weak development in pedagogical theory of an

integral system for the formation of digital culture of students in the educational process, taking into account the contexts of future professional activity;

- between the significant potential of the information and educational environment of higher education institution in the formation of digital culture in undergraduate students and insufficient development of methodological support for the use of modern digital resources and information and communication technologies to support students' educational and self-educational activities.

The objective need to overcome these contradictions allows us to define the research problem and relate it to the search for theoretical, methodological and scientific-methodological foundations for a more effective use of the possibilities of the information and educational environment of the university for the formation of digital culture in undergraduate students.

The object of the study is the process of formation of digital culture of undergraduate students in the information and educational environment of the university.

The subject of the study is the model of the pedagogical system of formation of digital culture of undergraduate students in the information and educational environment of the university.

The aim of the study is to develop and experimentally test the effectiveness of the model of the pedagogical system of formation of digital culture of undergraduate students in the information and educational environment of the university of undergraduate students in the information-educational environment of the university.

Hypothesis of the study: the use of resources of the information and educational environment of the university will contribute to the effective formation of digital culture of undergraduate students, if:

- the theoretical and methodological basis will be identified, which implies the application of the provisions of cultural, axiological, system-activity, environment, contextual approaches to identify the principles and systematisation of content and organisational and pedagogical means of methodological support of the process of formation of digital culture;

- the developed model together with pedagogical conditions will provide purposefulness, systematic and flexible inclusion of the components of the information and educational environment of the university in the process of formation of the studied quality;

- programme and methodological materials will reflect the necessary content of education, as well as the sequence of application of pedagogical methods and information and communication technologies during the implementation of forms of interactive, productive and creative activities of students using the resources of the digital environment;

- determination of the content of cognitive-processual, value-motivational, reflexive-activational and personal-developmental criteria and indicators, their corresponding levels and means of diagnostics will be forward-looking, ensure the success of the process and the sustainability of the sustainability of the result.

Methodology

Theoretical analysis of psychological, pedagogical literature on the problem of research, its generalization, definition of basic concepts, modeling, establishment of initial conceptual positions; pedagogical experiment, pedagogical observation, questioning, testing, collection and processing of diagnostic results, monographic method.

Results

The scientific results presented in the article are:

1. The digital culture of undergraduate students is considered as a pedagogical concept and is counted among a number of basic personal qualities formed on the basis of the transformation of digital literacy and information and communication competences. The content representation of this quality assumes that students have the knowledge, skills and abilities to work with information in the digital environment; ability and readiness for effective educational and

professional information activity; digital worldview, corresponding to the modern stage of society development. The students' mastering of cognitive-processual, value-motivational, reflexive-activational and personal-developmental components of digital culture is aimed at ensuring the success of future professional activity in the conditions of digitalisation of the economy.

2. The formation of digital culture in undergraduate students involves the process of purposeful achievement of information worldview, value-motivational orientations and a basic set of competences of professionally oriented information activity. This process is supported by the wide possibilities of the information and educational environment of the university, which is represented in the form of: a set of electronic information, educational and methodological resources, provided with technical and software means of access; information and communication technologies that organise interaction between specialists, teachers and students; interactive tools to support productive cognitive, educational and practical, research and self-educational activities of students. Flexible use of the resources of the information and educational environment ensures the success of the process and sustainability of the result of the formation of digital culture of undergraduate students.

3 The model of the pedagogical system under study is aimed at the formation of students' level of digital culture necessary for learning in the digital environment and further professional activity in the digital economy. This is facilitated by the reliance on the cultural, axiological, systemic-activity, environmental, contextual approaches and relevant principles. The model systematises the purpose and tasks at different stages of digital culture formation. Its content implies the identification of the necessary educational content, including elective disciplines in the form of e-learning including elective disciplines in the form of an e-learning course; description of the types of restricted and open access digital educational resources used (electronic databases, online journals, diaries, forums, wikis, professional social networks). The practice-oriented nature of the model is provided by the definition of ways to support face-to-face learning, identification of means of asynchronous (notice board, blog, interactive video lecture) and synchronous (chat,

video conference) electronic interaction, formation of tools for monitoring results and accounting of student attendance based on criteria and indicators of digital culture formation. The predictive elements of the model allow students to get a general idea of the role of digital culture in the implementation of labour functions and labour actions.

4. Expanding the possibilities of practical application of the components of the information and educational environment of the university is provided by the following pedagogical conditions: the use of educationally significant communication tools to popularise modern scientific knowledge among students; formation of the basics of digital etiquette among students through online communications with university professors; involvement of students in the design of distance education courses; use of the potential of scientific social networks to stimulate students' motivation for research activities.

5. Implementation of the methodology of formation of digital culture of undergraduate students is carried out taking into account the following principles: actualisation of value and outlook aspects of the content of education; the leading role of social and pedagogical interaction between the subjects of the educational process; active active development of the student on the basis of the unity of cognitive, research and educational-practical activity. The methodology implies consistent development of the level of digital culture in the course of mastering the content of education and e-course. In the course of mastering the developed educational content, the possibilities of the information and educational environment are widely used: electronic educational resources, digital communication technologies, information visualisation tools, network services of collective work, tools for creating links to additional sources of information using qr codes, diagnostic electronic tools. Students are involved in various forms of interactive, productive and creative activities using the resources of the digital environment.

Discussion

The investigated problem of forming digital culture of undergraduate students is complex and multifaceted. In modern conditions of digital transformation of the economy and social sphere, digital technologies are actively used in all branches of professional and everyday human life. The quality of a person's life and the quality of his/her professional activity depends on their confident and competent application. The labour market, culture, education and healthcare are changing dramatically under the influence of digitalisation - a global development trend based on the use of information in digital form. Information resources and services provided in the digital environment make it possible to overcome borders between countries and peoples, making cultural and educational values accessible to all those who are able to adapt to and interact effectively in the new technological environment (Esteve-Mon, F., Cela-Ranilla, J. M., & Gisbert-Cervera, M., 2016), (Bawden, D., 2001). The benefits of digitalisation should be available not only to information professionals, but also to ordinary citizens. This requires improving the information and digital literacy of the population in order to eliminate the digital divide.

A special level of information competences and digital culture should be available to university graduates in order to become competitive specialists in the developing knowledge society, using digital resources of culture and education.

A holistic concept of forming a student's digital culture has not been developed at present (Casas, J.P., 2020). A significant number of studies in recent years have been devoted to the formation of ICT competences of teachers and students of various profiles. ICT competences are an important component of digital culture, but they are oriented only on the technical, technological side, only on the technical, technological side of the problem. Digital culture, unlike ICT competence, has a value component in terms of the use of information technologies.

Let us first consider the socio-economic prerequisites that will allow us to move forward in resolving the issue of clarifying the concept of 'digital culture'. These include the development of the digital economy, digitalisation of education,

and the need for the population in general and students, future specialists, in particular, to master digital competences (Bawden, D., 2008), (Alkali, Y. E., & Amichai-Hamburger, Y., 2004).

At present, digital technologies, which provide easy and fast access to resources via the Internet, are already used in the economy and social life of society, as means of communication and as means of education. The advantage of digital technologies is due to the reduction of costs, cost of goods and price for the consumer. These technologies have an impact on employment by providing opportunities for remote work.

The share of freelancing, non-standard, part-time, ad hoc and other types of employment is increasing. New forms of labour market organisation require new competencies of specialists, which means transformation of the education system.

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Digitalisation of education gives rise to the following problems: it requires the transition of the education system to the use of digital resources, elaboration of ethical aspects of e-learning, taking into account the level of knowledge, needs and interests of the learner to develop a system of personalised learning (Prensky, M., 2001), (Jenkins, H., et al., 2009). The university teacher becomes a mentor and navigator in the educational process from a transmitter of information. The student must master information competences for critical self-assessment of his/her knowledge, building his/her educational trajectory, and further effective actions in digital society and in the future.

The use of digital technologies, learning tools and methods in education, scientists note the transition to dynamically structured systems of mental actions, and study the competence characteristics of the individual. Normative components 'competence' and 'competence' have been introduced in the standards of general, secondary and vocational education. One of the important components in the system

of one of the important components in the system of competences is information competences with the use of information and communication technologies, they are necessary for a specialist of any profile (Gardner, H., 2013).

There is a need of society to introduce new learning technologies, the need to 'teach today what will be necessary tomorrow'. A modern specialist, a university graduate should understand the leading trends in the development of economy and culture of society, methods and technologies of education, possess the competences necessary for the future professional sphere. It means that value-oriented professional education and digital culture of a specialist as one of its conditions become in demand (Prensky, M., 2010). So far, with sufficient information skills, there is a consumer attitude of students to information, the absence of the process of its transformation into knowledge and the basis for creative activity'. This is due to the insufficient level of information outlook and knowledge about the composition, capabilities and features of information resources; lack of mastery of algorithms for searching, analysing and synthesizing digital data, the reproductive nature of information processing and its transformation into knowledge.

Consequently, future specialists need to be trained not just in digital skills, but also to develop a value-based digital worldview, digital competences and digital culture necessary for life in a digital society. Graduates of higher education institutions, with digital culture will be able to become competitively capable specialists for the digital economy, if they assimilate professional experience at the worldview level and are able to synthesise educational and industrial information into professional knowledge (Iasechko, S., Pereiaslavska, S., Smahina, O., Lupei, N., Mamchur, L., & Tkachova, O., 2022).

The scientific foundations of various aspects of digital culture of an individual are in the field of attention of philosophy, culturology, pedagogy and psychology, computer science and other sciences.

Thus, the analysis of the economic, philosophical and socio-cultural foundations of the concept of 'digital culture' allows us to consider it from different angles: as a set of modern material and technical values based on digital ICT (Espinosa, E. O. C., Ruiz, J. A. C., & Mercado, M. T. C., 2021); a system of 'practices and

products of people's activities related to the culture of the digital age; a system of stable socio-psychological traits and qualities of personality and stereotypes of behaviour in the digital environment' (Warschauer, M., 2004).

For example, the digital skills dimension plays a significant role in learning because it includes important basic ICT skills, including digital tools (word processing, presentation software, email and social networking applications). At other levels of the digital skills dimension, learners can identify digital tools to fulfil the required tasks.

In the professional development dimension of ICT competencies for UNESCO teachers, the following are highlighted:

- technological skills to select, use and combine a variety of digital tools (Tapscott, D., 1998);

- communicative skills to connect and engage learners in a multimedia environment through a variety of media;

- pedagogical skills to use ICT to support students' learning and professional development, taking into account the possibilities and limitations of technology;

- managerial skills to plan, organise, effectively manage and evaluate educational processes using ICT;

- research skills to use ICT to create new knowledge.

Thus, the digital competences required in modern society, including for teachers and students, have been defined at the international level.

The digital competencies required in modern society, including for teachers and students, have been defined at the international level, and their assessment criteria, methods and development programmes have been developed.

In-depth analysis of the concept of 'information competence' of a teacher and its structural components reflected the diversity and similarity of researchers' points of view on the problem of classifying the structural elements of information competence, revealing regularities (Turkle, S., 2011). The main components of information competence:

- motivational-value - value orientations and motivational motivations of the learner to life and professional activity;

- professional-activity - the use of modern methods of searching, systematisation and generalisation, processing and application of information in professional activity;

- technical-technological - understanding the possibilities and limitations of technical devices in searching and processing information depending on the type of task;

- communicative - application of natural, formal languages and ICT tools for information exchange;

- Operational - the ability to carry out communicative, methodical and constructive activities.

Thus, We believe that the presence of motivational and value component allows us to talk about the formation of information and digital culture of a literate professional-specialist at the university.

It should be noted that in the conditions of digital economy the level of digital culture of society as a whole and personal digital culture of citizens of this society become determinant for the development of the state. Let us clarify the definition of digital culture. Under the digital culture of university students we will understand a system of personal qualities that includes the following components: knowledge, skills and abilities to work with information in the digital environment; ability and readiness for effective educational and professional information activities; digital worldview that corresponds to the current stage of society development.

We believe that this understanding of digital culture sets the level required for each student and graduate of higher education institution. The digital competences of students may differ depending on the sphere of future professional activity: education, economics, health care, etc. At the same time, digital culture should become a basic, indispensable quality of a future competitive specialist.

For a future specialist, we define three degrees of knowledge of information culture: reproductive (low), productive (medium), etc. creative (high). The formation of digital culture can be represented as a three-stage structure. On the. The first stage develops digital literacy: a basic set of knowledge and skills necessary to work with information and communicate digitally. environment. Knowledge of

the operating principles of computers and peripheral devices. understanding of the operating system and file structure, skills in working with office programs, email clients and applications. social media work is fundamental to digital literacy (Lankshear, C., & Knobel, M., 2008). Typically, university students have the required degree of digital literacy from a technological perspective. Problems arise when using this knowledge for independent information activities. Thus, on the formation of ICT competencies of students. University, we note that student abstracts, coursework and dissertations often contain a compilation of known material and are of a reproductive nature. Therefore, undergraduate students are required to have a higher level of working with information, which makes it necessary to master digital competencies. At the second stage - the formation of digital competencies - digital literacy must be complemented by the ability and readiness to work with information and its transformation, to critically evaluate information and one's own knowledge, the ability to create digital resources and observe information security and etiquette. In modern education, innovative teaching technologies are used, the virtualization of the educational process is increasing, digital tools are turning into the main means of the educational process. Therefore, successful learning requires search skills in electronic information networks, repositories of information educational resources and electronic libraries; critical assessment and structuring of knowledge, presentation of information in the form of multimedia objects. Important digital competencies are communication competencies: understanding the basics of netiquette and safe behavior on the Internet; speaking skills with media support, incl. for a virtual audience; the ability to participate in discussions of online materials in chats, forums and blogs; skills of electronic correspondence, mailing to the target audience; communication on social networks, etc.

We believe that digital competencies should be purposefully developed in the process of students mastering various disciplines.

The third stage – digital culture – represents the worldview, axiological and reflective level of information preparation. When mastering this stage, the student has formed information needs and interests, he understands the value of digital resources and technologies and is motivated to turn to sources of information, is

capable of self-assessment of digital culture, and is included in online communities. Digital culture makes it possible to effectively carry out educational, and subsequently professional information activities.

As digital skills, this table presents the skills needed to live and work in the digital economy. These include technical skills, formalized technologies (hard skills) and socio-behavioural, cognitive skills (Soft skills). These skills characterize the professional culture of the future specialist and are in demand by employers in the era of the digital economy. Digital skills are divided into user-specific and specialized professional.

Conclusion

Thus, in the article:

1. The prerequisites and grounds for the relevance and significance of the studied problem of the formation of digital culture of undergraduate students at the university are determined. The socio-economic prerequisites are highlighted: the development of the digital economy, the digitalization of education, the need for the development of digital competencies by the population in general and by students and future specialists in particular. The analysis of the economic, philosophical and sociocultural foundations of the concept of "digital culture" allows us to consider it from various angles: as a set of material and technical values of modern society; a system of results of people's activities related to the creation of cultural values of the digital era; system stable personal socio-psychological qualities and behavioral stereotypes in the digital environment. In accordance with this, the scientific and pedagogical grounds for clarifying the personal content of the concept of "digital culture" have been identified.

2. Based on the accepted periodization, the transformation of the category "information culture" as a personal quality that unites various competencies in the use of information resources into the category "digital culture" is considered.

3. The gradual formation of ideas about ICT competencies required in the modern educational process at the international level is presented: UNESCO, the European Union.

4. The relationship between the concepts "digital literacy", "digital competence", "digital culture", "digital skills" and their structural components is presented. Based on this relationship, the formation of digital culture is presented as a three-stage structure.

The validity and reliability of the research results are conditioned by the reliance on the actual scientific research of the digital culture of the individual and the possibilities of its formation in the conditions of digitalisation of education; reliance on a set of authoritative methodological foundations; the use of a coordinated set of methods of scientific research; the design and consistent implementation of the stages of determining and forming research; the introduction of theoretical results and methodological developments into the practice of the educational process.

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