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INFORMATION AND COMMUNICATION COMPETENCE OF THE EDUCATOR IN THE MODERN WORLD: ANALYSIS OF INTERNATIONAL APPROACHES

A Today, the education system experience the significant progress in information and communication technologies and their impact on the educational process and training of young people. It is especially important for educators to be able to navigate the information and communication technologies field, apply it according to their needs, and develop and improve their quality of life. Competence in the development of information and communication technologies is considered the main competence. Competence is the proven ability to apply knowledge, skills, personal, social, and/or methodological abilities in work and learning, as well as in professional and personal development. Competence is the result of professional experience, the consequence of its accumulation during professional life and activity, which ensures a deep understanding of one's business, the essence of the work performed, ways and means of achieving goals and the ability to assess the professional situation correctly and make the necessary decision in this regard. The structure of competence includes basic elements such as knowledge, experience, professional culture, and personal qualities of a specialist. The competence of an educator is conditioned by the peculiarities, richness, diversity, and integration of professional experience and is determined by the individual and his/her organizational culture. Information competence was recognized as one of the main components of educators' communicative competence. Information and communication competence refers to the ability of a person to navigate information spaces, operate with data based on the use of modern

information and communication technologies in accordance with the needs of the labor market and effectively perform professional duties. An educator with a high level of information and communication competence is capable of actively forming concepts as units of mental resources of consciousness and an information structure that reflects a person's knowledge and experience.

Keywords: information and communication technologies; digital competence; information competence; information and communication competence; educator

ІНФОРМАЦІЙНО-КОМУНІКАЦІЙНА КОМПЕТЕНТНІСТЬ ПЕДАГОГА У СУЧАСНОМУ СВІТІ: АНАЛІЗ МІЖНАРОДНИХ ПІДХОДІВ

С Нині система освіти переживає значний прогрес у сфері інформаційно-комунікаційних технологій та їхній вплив на освітній процес і підготовку молоді. Особливо важливим для освітян є вміння орієнтуватися у сфері інформаційно-комунікаційних технологій, застосовувати їх відповідно до своїх потреб, розвиватися та покращувати якість життя. Розвиток компетентності в галузі інформаційно-комунікаційних технологій розглядається як основний. Компетентність – це підтверджена здатність застосовувати знання, вміння, особистісні, соціальні та / або методологічні здібності у роботі та навчанні, а також у професійному та особистісному розвитку. Компетентність – це результат професійного досвіду, наслідок його накопичення протягом професійного життя і діяльності, що забезпечує глибоке розуміння своєї справи, сутності виконуваної роботи, шляхів і засобів досягнення цілей, здатність правильно оцінити професійну ситуацію і прийняти у зв'язку з цим необхідне рішення. Структура компетентності включає такі основні елементи, як-от: знання, досвід, професійну культуру та особистісні якості фахівця. Компетентність педагога обумовлена особливостями, багатством, різноманітністю та інтегрованістю професійного досвіду і визначається активністю особистості та її організаційною культурою. Інформаційна компетентність визнана однією з основних структурних складників комунікативної компетентності педагога. Інформаційно-комунікаційна компетентність передбачає здатність людини орієнтуватися в інформаційному просторі, оперувати даними на основі використання сучасних інформаційно-комунікаційних технологій відповідно до потреб ринку праці та для ефективного виконання професійних обов'язків. Педагог, який має високий рівень інформаційно-комунікаційної компетентності, здатний активно формувати поняття як одиниці ментальних ресурсів свідомості та інформаційної структури, що відображає знання і досвід людини.

Ключові слова: інформаційно-комунікаційні технології; цифрова компетентність; інформаційна компетентність; інформаційно-комунікаційна компетентність; педагог

Introduction. An important component of the new educational paradigm is the idea of lifelong learning, which covers all forms, types and levels of learning activities. In turn, the formation of information competence is a set of spiritual values in the field of information relations created by humanity throughout its history. In the period of transition to the information society, it is necessary to prepare a person for the rapid perception and processing of large amounts of information, mastering modern means, methods and technologies of working with information resources in the process of forming the professional and pedagogical communicative competence of an educator in the learning space.

Indeed, today the education system experience the significant progress in information and communication technologies (ICTs) and their impact on the educational process and on the young people's training. Information technologies in education have led to a number of reforms related to the emergence of educational networks, new forms and means of teaching and learning, and the emergence and widespread use of new pedagogical technologies.

Information and communication technologies and tools become easier to use. They are aimed at storing large amounts of information and data, and are intended to be used by people as soon as possible for their own educational, professional and leisure needs. Cloud services allow for quick and effective steps to improve production, training, professional and personal development, including the development of the educational system, and require the appropriate level of information and communication (IC) competence.

It is especially important for educators to be able to navigate the ICT field, apply it according to their needs, develop

and improve their quality of life. The development of ICT competence is seen as the main one in this regard.

Analysis of previous studies and publications. Many scholars have studied the development of information competence and the formation of educator's communicative competence in the modern educational space. In particular, the essence of the concept of pedagogical communication was studied by N. Butenko [4], I. Kamyshna and L. Pavlovych [17], O. Kondrashova [22], V. Maslova [24], etc., the structure of an educator's communicative competence was studied by N. Volkova [30], L. Berezovska [3], etc. Works of T. Charkina [8] are devoted to the formation of the teacher's communicative culture; technologies for the development of the teacher's communicative skills and their structural components were outlined by A. Kapska [18] and others.

It should be noted that many studies have developed a general framework for studying competence issues in depth [25]. However, we should mention that scientists have studied only some, albeit important, aspects of this problem, in particular, the formation of future teachers' communicative culture [15; 27], the formation of information competence [16; 26], etc.

The study of the possibilities of information technologies in the formation of information and communication competence of future specialists is a distinctive feature of modern research [19].

In this regard, **the purpose of the study** is to analyze approaches to understanding the information and communication competence of an educator in the modern world.

Results and discussion.

Approaches to the definition of competence

Nowadays the formation of information and communication competence is crucial in the educational systems of economically

developed countries. Ukraine is in the process of developing and implementing new standards, curricula, and teaching and learning materials in the field of ICT. One of the most important scientific issues is to enable the use of information and communication technologies in accordance with the needs of the education system. Integration of ICTs into the educational process is closely related to pedagogical practices, forms and methods of teaching and learning.

Today, in the context of numerous discussions around information and communication competence, it is important to analyze it, to determine its place in international comparative studies, and to clarify this concept in accordance with the approaches of domestic and foreign authors in the context of a competence-based approach to education in the global dimension.

The competence-based approach to the teaching process is one of the directions of modern educational policy in many countries. The competence approach is the basis of national qualification frameworks in different countries and Ukraine. In particular, the definition of competence is still under discussion. To clarify the existing differences, it is necessary to analyze the documents that interpret this concept.

In order to clarify the differences in the use of terms in the field of education, the The European Centre for the Development of Vocational training (Cedefop) published a European multilingual glossary in 2004 to define key terms that are important for a common understanding of modern educational policy in the field of vocational training in Europe. Thus, the glossary defines "skills" as "the knowledge and experience required to perform specific tasks and work". Competence, on the other hand, is defined as "a proven ability to apply knowledge, skills, personal, social and / or methodological abilities in work and learning, as well as in professional and personal development" [6].

At the same time, the glossary is based on the main documents of the European Commission, which also clarify that competence is the ability to apply learning achievements adequately to defined contexts (in education, work, personal and professional development). Competence is not limited to cognitive elements only; it includes functional aspects (including technical skills), personal qualities (including social and organizational skills), and ethical values [7].

In the Ukrainian pedagogical tradition, the term "competence" is used to define the level of awareness of a specialist in his or her professional activity. Thus, competence is the result of professional experience, the consequence of its accumulation during professional life and activity, which ensures a deep understanding of one's business, the essence of the work performed, ways and means of achieving goals, the ability to assess the professional situation correctly and make the necessary decision in this regard [20]. The structure of competence includes such basic elements as knowledge, experience, professional culture and personal qualities of a specialist. The competence of an educator is conditioned by the peculiarities, richness, diversity, and integration of professional experience and is determined with the activity of the person and his or her organizational culture.

The concept of "pedagogical competence"

Since European countries have now begun a thorough discussion on how to equip people with the necessary skills and knowledge to ensure their harmonious interaction with the rapidly developing technological society, it is important to understand the concept of competence in pedagogical science and practice, and in the knowledge-based society. It is necessary to determine what competences need to be formed and how, what should be the result of teaching and learning.

The following groups of competences are identified [23]:

1. *Social competence* is the ability to take responsibility, cooperation, initiative, active participation, and dynamic knowledge. This concept also includes openness to the world and responsibility for the environment, the ability to work in a team (which includes the traditional concept of work ethics), and acceptance of the activities of democratic institutions of society.

2. *Communicative competence* is the ability to communicate orally and in writing form, in native and foreign languages.

3. *Multicultural competence* is not only the mastery of the achievements of culture, but also understanding and respect for people of other nationalities, religions, cultures, languages, races, political preferences and social status.

4. *Information competence* is the ability to obtain, comprehend, process and use information from various sources.

5. *Self-development and self-education competence* means to have the need and willingness to learn continuously throughout life.

6. *Competence of productive creative activity.*

Attention to the competency-based approach led educational circles to identify the key (most important and integrated) competences that influence the success in life and improve the quality of social institutions; they correspond to various fields of life. The concept of key competences is quite multifaceted. In this context, international organizations offer a number of distinct key competences and their generalized supercategories. There is still a broad discussion, caused primarily by the labor market's need for professionals who do not only have professional skills, but also learn quickly, adapt to new market needs and changes in society, are able to work in the context of advances in information and communication technologies, are able to resolve and overcome conflicts, live and work in a multicultural society, and respond positively and constructively to reforms and challenges of the times.

Thus, the information competence was recognized as one of the main structural components of an educator's communicative competence.

Digital competence and information competence

The study "Digital Competence in Practice: An analysis of frameworks", published by the European Commission, states that within the framework of the European Recommendations of the European Union [12], digital competence is recognized as one of the key competences in the context of lifelong learning in the European Union. It is defined as the ability to use information and communication technologies confidently, critically and creatively in order to achieve the goals related to

work, employment, learning, leisure, inclusion and participation in society. This competence is seen as transversal, contributing to the achievement of other competences related to languages, mathematics, study skills, cultural awareness, etc. and is considered to be a 21st century skill that all citizens need to achieve to ensure their active participation in society and its economic development [13].

In the early 2000s, international circles began to research the competency-based approach, which, according to researchers A. Ben Youssef and M. Dahmani [2], is closer to the labor market. From the perspective of employers, a competent person can be considered the one who performs well in the role expected of him or her regardless of profession. Researchers define competence as "a set of abilities, skills, knowledge, and attitudes necessary for optimal performance in one's profession or productive role in life." The concept of information and communication competence (IC competence) is understood by these researchers as a set of knowledge, skills and attitudes used to implement the information and communication systems, including the tools applied and, especially, the ability to conduct the web design, develop presentations, use graphic programs, information from online libraries, web browsers, Word program, etc. [10].

According to modern researchers, information competence in the narrow sense is associated with the ability to use information technologies, tools and methods. This is actually competence in the field of information and communication technologies. In a broad sense, it is the ability to rethink information, solve information retrieval problems using library and electronic information retrieval systems, that is, to carry out information activities using both traditional and new technologies [21].

According to M. Holovan, the significant features of information competence include: the use of a computer as a necessary technical tool; a set of knowledge, skills and abilities to search, analyze information data; value attitude to information activities; the presence of an actual educational or professional task in which information competence is actualized and formed [16].

Definition of information competence in education

Today, education is being informatized through a whole range of measures related to the transformation of pedagogical processes based on the implementation of information technologies into education. The use of modern technical devices and information technologies in the educational process leads to a new understanding of the didactic process, its analysis, and the establishment of new principles of teaching and learning. For example, the principle of accessibility in traditional education is realized taking into account the individual and age peculiarities of students, in computer-based learning "there is a transition from the principle of general accessibility to the principle of individual accessibility" [29, p. 128]. Information competence is most effectively realized during problem-based learning, when using multimedia technologies and applying the project method.

The information and communication competence of a teacher is considered as a part of the socio-cultural competence

of a person, which allows him / her to exist in the world of culture, i.e. the world of symbols and signs, social codes, behavior, communication. Although this concept is not identical to "socio-cultural competence", the following characteristics are distinguished in general [21]:

- a) the way of achievement (socialization, inculturation, etc.);
- b) the result and indicators (a person's ability to adapt and integrate into society: identification and self-identification, etc.).

The concept of "information and communication competence"

Information and communication competence is included into the list of key competences in the main strategic international documents. It is cross-cutting, multifunctional, and can be applied in various life areas. The question remains how information and communication competence should be reflected in the content of education and in the system of teacher training and professional development. Moreover, considerable efforts are needed to create an appropriate environment to ensure the formation of information and communication competence, to create appropriate standards at different levels of education, etc. However, today, there is no unity in these issues in the national education system between academic and official circles.

Information and communication competence implies the ability of a person to navigate the information space, to operate with data based on the use of modern ICT in accordance with the needs of the labor market and for the effective performance of professional duties. This category should also include such elements as value orientations, i.e. critical view and critical analysis of information and data that make up the content obtained from various sources and with the help of information and communication technologies [21].

The issue of identifying the information and communication competence as a key competence has also become a subject of debate due to numerous comparative studies that are regularly conducted in countries around the world to compare educational systems and their quality [5; 13]. There is still a variety of opinions on what exactly the key competence related to ICT should be called. In scientific works, the key competences in the field of information and communication technologies are mentioned as digital literacy (DL), electronic competence (e-competence), etc. [9].

Due to the different approaches to defining this concept, the study "Strategies to Promote the Development of E-competencies in the Next Generation of Professionals: European and International Trends", conducted at the University of Mexico, reveals a generalized view of scientists. Thus, the main discussions around the concept took place within the framework of the development of strategic documents by international organizations, such as the Ontario Ministry of Education and Training (Canada) (1989), CEDEFOP (2004), OECD (2007), UNESCO (2008), Becta (2009), etc.

Researcher J. Cobo Romani identifies five concepts that, in his opinion, constitute the content of e-competence: e-awareness, technological literacy, information literacy, digital literacy and media literacy [9]. He notes that in his study such concepts as e-competence, digital competence, information

and communication competence are synonymous, which indicates the debatable nature of such concepts [9].

It should be noted that differences in the definition of concepts related to the formation and application of the information and communication area are closely related to the context in which they are used. For example, the reports of the Organization for Economic Cooperation and Development support the view that unclear terminology in this area exists due to the use of different terminology for the information and communication technologies sector in accordance with the state of development of society and other areas, namely, *new economy*, *e-economy*, *ICT sector*, etc. This means that such concepts change depending on the scope of application.

In foreign educational systems, the concept of information and communication competence also includes the following: digital literacy, technology literacy, information and technology literacy, technology literacy, information and communication technologies competence (ICT competence), information and communication skills (ICT skills), information and communication abilities (ICT abilities), etc.

One of the concepts used by international circles along with information and communication technologies competence is *digital literacy*. It is worth highlighting this category, as it appears in the vast number of international documents and educational standards of many countries and deserves the attention of researchers. The concept of digital literacy is understood to include those characteristics that are inherent to the competence, as it implies not only literacy as it is, but also the ability and capacity to express judgment and take a stand in the use of information and communication technologies [28]. This interpretation suggests that the category's characteristics include not only the elements that are indicators of knowledge and literacy, but also the values and personal qualities that are formed by a person along with the acquisition of the necessary amount of knowledge.

Information and communication competence of educator

Training of competent educators today is one of the priority tasks of modern further education. It is the competence that helps a specialist to deal effectively with various tasks related to the professional activities. Competent specialists are different from qualified specialists by the fact that they implement professional knowledge, skills and abilities in their work; they always engage in personal development and go beyond the scope of their discipline; they consider their profession a great value [14].

It should be noted that almost all scholars distinguish competence in the field of information and communication technologies (ICT) as one of the key components of educator's professional competence. This competence implies the ability of the educator to apply various information tools in teaching, working with pupils, parents and the public effectively. Use of ICT knowledge by a educator makes it possible to highlight the novelty of educational material effectively and affordably during the lesson; demonstrate interdisciplinary relationships; to give examples of practical application of knowledge, skills and abilities on a particular subject; implement problem and heuristic learning, demonstrate complex natural processes, etc. [5].

It is common for the European Community to evaluate the information competence as a component of media competence and the wider ability "to be able to learn" and ICT competency that, actually, is related with the possibilities of appropriate use of the corresponding telecommunication facilities. At the same time, information literacy means that a person understands the necessity of different information that one can find, can evaluate it and use and, necessarily, it is proposed to differentiate the notion of information and communication literacy, network literacy, Internet literacy, digital literacy, media literacy and computer literacy [1].

The study identified one of the main trends characterizing the requirements for the level of ICT competence of a modern educator – a shift in emphasis from the tasks of the technological level (relating to the learning of specific tools, specific software products) to the tasks of the pedagogical level. In other words, a modern educator should be purposefully and independently, with knowledge of requirements for professional life, implement ICTs in the process of education, methodological, research activity and their own lifelong professional pedagogical activity. Based on the analysis of pedagogical situations, the educator must see and formulate teaching tasks and find the best ways to solve them with maximum use of ICT opportunities. Educators with a high level of ICT competence use ICT in educational activities fundamentally in a different way, referring to them not only as a means for presentation of educational material (presentations) but also for the creation of various types of individual informational banks aimed at supporting and developing their professional activities (methodologies, testing programs, electronic workbooks, student learning organization systems, portfolio, etc.), thereby expanding the overall informational environment of the learning process. In this regard, the ICT competence of a modern educator is one of the most important indicators of the success of educators' activity and, at the same time, is a prerequisite for further enhancement of one's professional competence [11].

A number of studies have been conducted by Ukrainian scholars that discover the content of key competencies in the application of information and communication technologies. The informational competence has been determined as a confirmed ability of the individual to use information technologies for the guaranteed assimilation and reporting of information for satisfying their own individual needs and meeting the public requirements about the formation of general and professional competencies of a personality [31]. Taking into account different aspects of the consideration of the concept "Educators' ICT competence" in works of Ukrainian scholars, we can conclude that the information and communication competence of the educator can be interpreted as the combination of professional knowledge, skills and experience of the educator, expressed in the technology of solving pedagogical tasks by means of modern information-communication technologies.

Conclusions. Thus, an information competence is an important component of the formation of professional and pedagogical communicative competence of an individual as one of the main directions of the process of informatization in education, which is a need of modern society.

To summarize the debate on information and communication competence, it should be noted that this concept is still in a state of development. Ukrainian specialists, like most researchers in Europe, offer the same names for this concept and mostly include similar characteristics. However, it should be recognized that scientific research in national education is still characterized with subjective needs when characterizing the concept of information and communication competence and putting content into it in accordance with the goals and topics of scholars' own studies. In this way, they limit or expand the content of the concept to the range of issues they need to study. For the most part, researchers understand this concept as the proven ability to work individually or collectively using tools, resources, processes and systems that are responsible for accessing and evaluating information (data and statements) obtained through any media resources and using such

information to solve problems, communicate, create informed decisions, products and systems, and gain new knowledge.

An educator who has a high level of information and communication competence is capable of actively forming concepts as units of mental resources of consciousness and an information structure that reflects a person's knowledge and experience. The formation of skills, including communication skills, will be more effective the deeper the educator's personality masters communication knowledge and relevant skills, namely, the automated conscious actions that contribute to the quick and accurate reflection of communication situations in the classroom.

Prospects for further research within the framework of the outlined issues are to study other aspects of an educator's communication competence that are relevant in the modern world.

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