

PEDAGOGICAL ASPECTS OF THE DEVELOPMENT OF TEACHER'S DIGITAL COMPETENCE

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INTRODUCTION

The challenges of modernity have led to the importance of developing the skills of widespread use of information and communication technologies for effective communication and cognitive activity in various social spheres. This problem is especially relevant in the educational process, as it is the institutions of higher education that have the maximum responsibility for the formation of a person with a high level of development of digital competence. The need for regular use of information technology in the professional activities of teachers needs continuous improvement to improve their knowledge and skills in the field of digitalization.

The digital sphere in HEIs provides the organization of work with entrants (informing about an educational institution, creation of a personal office of the future student). The organization and management of the educational process are based on digital technologies (creation of electronic information and educational environment HEIs, keeping records of the number of students, automation of calculating the workload of research and teaching staff, scheduling and ensuring its availability from various electronic devices, providing students with access to electronic library systems and teaching materials developed by HEIs teachers, implementation of e-learning and implementation of distance learning technologies in the educational process). On this basis, it is

necessary to create a system of pedagogical aspects that will contribute to the development of each new level of digital competence.

LITERATURE REVIEW

The concept of digital competence is widely studied in the world and Ukrainian scientific literature. Myroshnychenko (2020) defines digital competence as the comprehensive ability to select, create and modify digital resources, manage them, protect and disseminate, apply them in the learning process, expand the possibilities of working with them and promote the formation of their digital abilities. Digital competence is a concept that is increasingly used in public educational discourse. Understanding the significance of this concept for higher education allows for more research-based on critical perspectives to avoid illiterate use of the content of this concept (SPANTE, HASHEMI, LUNDIN & ALGERS, 2018).

Pedagogical digital competence refers to knowledge, skills, and attitudes, as well as technology, learning theory, subject, context and learning, and the relationship between them (FROM, 2017). It should be noted that the scientific consideration of the concept under study should be consistent. Therefore, it is necessary to understand the interpretation and complication of the importance of digital competence from the school level (digital competence of teachers) to the level of HEIs (digital competence of teachers). Thorough systematic consideration of this concept will highlight its basic features. According to Instefjord, Munthe (2017) digital competence will be successful if it is integrative (it means the continuity of digital education in the learning environment).

The approach to the development of digital competence of foreign teachers, the characteristics of digital competence are described in the article by Ovcharuk (2019). On this basis, scientists Kartashov, Bakhmat, Plish (2018), considering new ways to develop the digital competence of teachers, point to the basic prerequisites for improving digital competence, which can be transferred to high school graduates. This way of affirming the digital competence of graduate students in a positive sense will create challenges for the digital competence of teachers. Fraile, Penalva-Velez, Mendioroz Lacambra (2018) developed the minimum requirements that must be met by educators to be able to include ICT in the educational process and promote methodological changes in education.

Redecker (2017) presents the pan-European structure of digital competence of teachers (DigCompEdu) as a scientifically based system that helps to manage the policy of the educational process (teacher management) and can be directly adapted to implement regional and national tools and curricula. Pettersson (2018) examines international research over the past 10 years on digital competence issues and links them to education policy (educational management), organizational infrastructure, strategic leadership, and teaching methods.

Morse, Vasylenko, and Gladun (2018) explored ways to increase the motivation of teachers to develop their digital competence through a specially designed questionnaire in which teachers identified current educational trends. A year later, on this basis, Morse, Bazelyuk, and others (2019) developed a project that comprehensively explored the concept of digital competence (structures, descriptions, levels of digital competence). The work of Doumanis, Economou, Sim & Porter (2019) presents the results of an experimental study of the impact of multimodal interaction in real-time on the user experience of HEIs teachers. For many years, the development of various models describing the scope of digital capabilities of HEIs teachers, but only in recent years, world science began to focus on improving skills in the use of "educational" programs and digital information to effectively combine pedagogical and methodological knowledge. This integration of digital resources in teaching provides an impetus to improve learning outcomes (FALLOON, 2020). On this basis, Cahen & Borini (2019), using the inductive methodology of multiple studies, developed a new design, which was called "international digital competence".

Dias-Trindade, Moreira, Ferreira (2020) analyzed the digital competence of Portuguese teachers. The results proved the need to increase the level of their digital competence by conducting more practical, experimental training. The digital competence of the Swedish educational space defines four aspects of digital competence: the use of digital tools and media, programming, critical awareness, and responsibility (GODHE, MAGNUSSON & HASHEMI, 2020). Karsenti, Poellhuber, Parent, & Michelot (2020) believe that digital competence is a complex system that can take years to adapt. Some scientific investigations (CANINA, & ORERO-BLAT, 2021) provide a relatively complete theoretical overview of several definitions of digital competence, as well as a practical and realistic tool for assessing the digital competencies of the individual.

The digitalization of society and the current situation of blocking the flow of pure information requires teachers to have a high level of digital competence. Because of such social processes, teachers cannot procrastinate in performing professional tasks related to the use of digital competencies. Sometimes teachers independently slow down the implementation of administrative and organizational actions related to the correction of students' work due to their weak beliefs in competence and fear of failure (Kosycheva et al., 2020). Such trends are especially acute in the COVID-19 pandemic. Quarantine restrictions have established distance learning as a reality, and traditional learning in HEIs has begun to transform into virtual learning. The introduction of distance learning has exacerbated the problem of the need for teachers to improve constantly their digital competencies. In Latvia, digitization processes in education are under development. Digital transformation in education is an important process of change, which is based on changing the content, organizational forms, methods, teaching aids to work in a digital educational environment (DZERVINIKS, USCA, LUBKINA, & POPLAVSKIS, 2020).

Lindfors, Pettersson, & Olofsson (2021) explored the individual, collegial and organizational conditions that determine the performance of a dual didactic task (teaching and education),

namely the use of digital technologies in such a way as to provide teachers with the professional digital competence necessary for their further professional development. Teachers of HEIs during the constant scientific and pedagogical professional growth must master new methodologies and trends in their field. The importance of digital literacy is at the heart of improving and updating the level of teaching (MIRETE, MAQUILÓN, MIRETE, RODRÍGUEZ, 2020). University teachers need to be competent enough to meet the new challenges of today's digital society. This digital competence, both technical and pedagogical, allows teachers to enrich their teaching, develop the digital competence of their students and continue their professional development (ESTEVE, LLOPIS, ADELL, 2020).

The introduction of 2.0 tools (GUILLÉN-GÁMEZ, MAYORGA-FERNÁNDEZ, BRAVO-AGAPITO et al., 2020) has become a reality in the HEIs. Various dimensions, including knowledge and educational use, should be considered to assess teachers' digital competence. It is important to understand the qualitative differences between the knowledge and use of ICT by teachers, in particular for different 2.0 tools, as well as different modules on the Moodle virtual platform (t-Student).

AIMS

The purpose of the study is to identify the elements of the digital chart of teachers of HEIs based on a system of related pedagogical aspects.

Research tasks:

- consider the concept of "digital competence", "digitgram" in pedagogy, sociology, psychology, teaching methods;
- to survey HEIs teachers to determine the level of formation of their digital competence and the impact on it of the conditions of teaching;
- to conclude an indicative model of a digitizer based on pedagogical aspects with the prescribed stages of formation of digital competence to implement them in the educational environment of HEIs.

RESEARCH METHODS AND METHODOLOGY

The methodological basis of the study consists of the following methods:

1. empirical (observation, experiment, comparison);
2. quasi metric (statistical calculation);
3. modeling (model creation, forecasting).

The study was conducted in three stages among teachers of the National Pedagogical University named after M.P. Drahomanov (Ukraine) to determine the level of formation of their digital competence. The total sample of respondents was 100 people. The purpose of the zero stage (March-April 2020) was to determine the level of formation of digital competence of teachers at the beginning of the transition to distance learning. At this stage, empirical observation of the experience of teachers was used through an experiment to determine. At the intermediate stage (May-October 2020) experimented with molding to prove that digital literacy is formed within six months, provided that the system has pedagogical aspects of epistemological, motivational, futuristic, prognostic, prolonged approaches and regular stay in the digital environment. At the final stage (October 2020-April 2021) the comparison revealed a qualitative increase, which manifested itself in high numbers to improve digital competence over six months. A re-comparison was conducted in April 2021 to determine the sustainability of digital literacy and the effectiveness of the use of the proposed resources (including digital skills for teachers (Action. Digital Education), courses from the Academy of Digital Development) to improve it. Qualimetry (statistical method) was used to determine the percentage of scientific intelligence results at all proposed stages. The simulation was used to form a model of a universal digitizer for HEIs teachers.

RESULTS

The importance of the system of pedagogical aspects for the development of digital competence is explained through the definition of the terminology of the concepts "digital competence", "digital diagram", "digital graph". Digital competence from the point of view of pedagogy is a complex phenomenon that determines the teacher's stay in the information society. There are four components to this structure: knowledge; skills and abilities; motivation of teaching activity; academic responsibility, which is realized in the learning environment in various ways, including work with content, online communication, innovations of the technosphere in the laboratory, etc. The digital competence of the teacher of HEIs presupposes, firstly, mastering of skills to use digital technologies that have advantages in comparison with traditional training, in the educational process:

- digital technologies significantly expand the possibilities of presentation of educational information;
- the ability to use color, sound graphics, all modern video equipment that reproduces the real environment;
- technologicalization allows to significantly increase the motivation of students to study;
- digital technologies involve students in the process of learning and education, contribute to the fullest disclosure of their creative abilities, activating cognitive activity, allow them to visualize the result of their actions.
 - Digital competence from a sociological point of view is the willingness and ability to use effectively and systematically information and communication technologies in various spheres of life based on the possession of information competencies as a system of knowledge.
 - Digital competence from a psychological point of view is a personal and professional quality necessary for the successful professional activity of a modern person, which includes:
 - information and media competence - knowledge, skills, motivation, and responsibility related to the search, understanding, recording of textual, visual, audio, and video materials, archiving of digital information in the brain, as well as the creation of materials using digital resources and their critical analysis;
- communicative competence - knowledge, skills, motivation, and responsibility required for online communication in various forms (e-mail, chats, blogs, forums, social networks, etc.) for various pedagogical purposes;
- technical competence - knowledge, skills, motivation, and responsibility that allow you to effectively and safely use the appropriate software to solve various problems, including the use of computer networks without harm to mental health;
- consumer competence - knowledge, skills, motivation, and responsibility that allows you to solve using a computer and the Internet various everyday tasks related to specific life situations that meet different needs.

Digital competence in terms of teaching methods is a multilevel system that covers the criteria and indicators of the formation of digital competence of the teacher. Their relationship is discussed in Table 1.

Table 1. Criteria and indicators of formation of digital competence of the teacher

Criteria	Indicators of the formation of teacher's digital competence		
	Low level	Average	High level
Motivation for information activities	Positive, interested attitude to information activities	The system of value orientations concerning information activities is sufficiently formed and adequate in the system of public perception of values in the processes of informatization	Highly motivated sphere of interests, inquiries, desire to satisfy them in information activities
Information knowledge	Search, storage, processing, and transmission of information, its mechanical reproduction in strict accordance with the proposed tasks are at the level of elementary ideas	Search, storage, processing, the transmission of information, its reproduction with elements of analysis are at the level of knowledge about the principles of working with information	Search, storage, processing, the transmission of information, as well as its reconstruction are at the level of system knowledge about how to work with information
Information skills	Has basic skills in working with information; partially formed skills and abilities of abstract work design and superficial idea of its representative support.	Has the skills and abilities to use ICT in pedagogical educational and extracurricular activities; formed skills and abilities to design an abstract work and create different types of its presentation at a sufficient level.	Has the skills to use ICT in pedagogical and extracurricular activities; formed skills and abilities to design an abstract work and create different types of its presentation using previously acquired knowledge and experience in creating presentations
Competitiveness of the individual	Weakly expressed a desire for self-education, self-realization, self-improvement; unpreparedness of abilities and skills of self-education, self-realization, self-improvement is revealed.	Desire, willingness, and ability to adapt in a changing information environment; pronounced manifestations of skills and abilities of self-education, self-realization, and self-improvement.	Readiness and need for continuous self-education.

Source: Author's table

The severity of indicators characterizes the following levels (high, medium, low) of the formation of digital competence of the teacher:

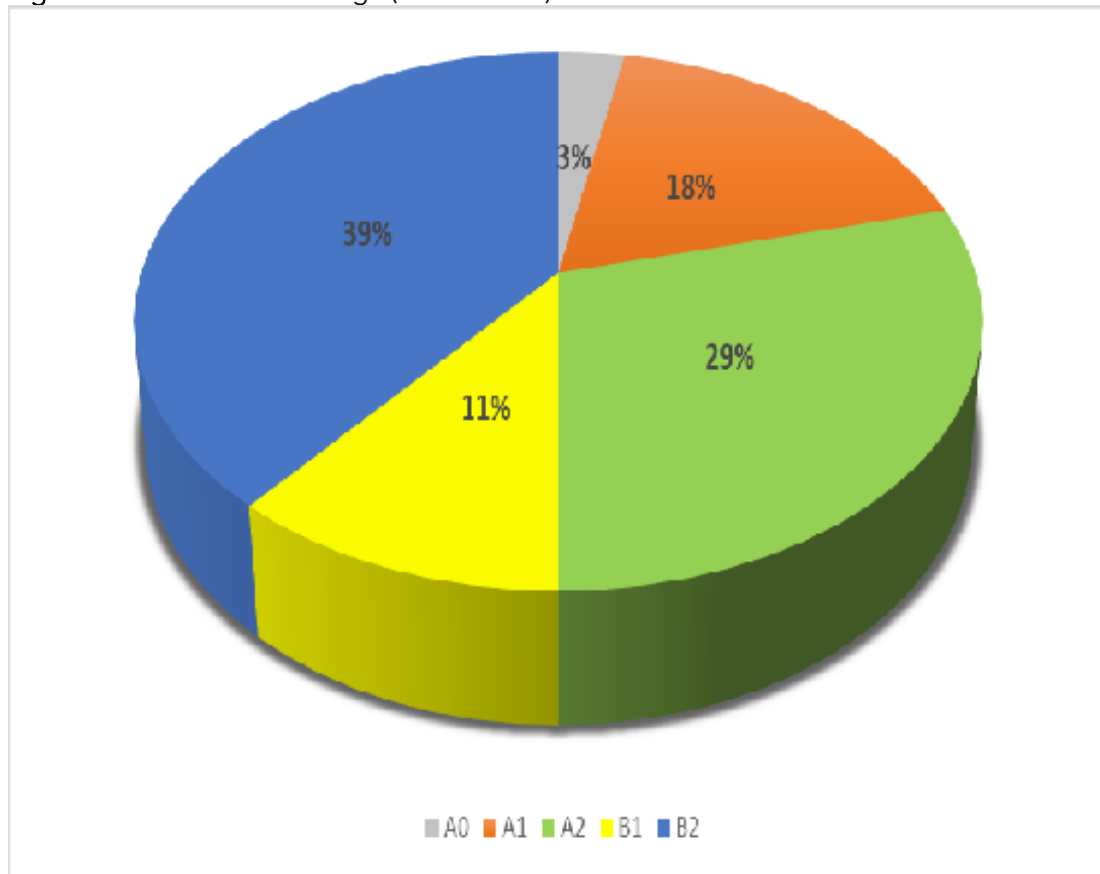
1. low level is a level that is characterized by the manifestation of individual components or individual elements of the structure of digital competence. Its actualization is possible in limited information activities;
2. the middle level is a level which is characterized by active development of components of digital competence, the possibility of their actualization in productive information activity;
3. high level is a level that is characterized not only by the intensive development of all components of digital competence but also the transition to the level of self-education, self-improvement, and self-realization, as well as the development of some features of competitiveness.

From a sociological point of view, a digital chart is a specialized chart that shows the level of formation of digital competence according to the international standard to the level of C2.Digitizer - a system that the applicant of the level of digital literacy should focus on determining the initial indicators of the current level of digital knowledge. The practical implementation of these concepts will work comprehensively only in certain aspects of the educational environment. Let us highlight the basic pedagogical aspects necessary for the development of digital competence:

1. Epistemological approach (available basic knowledge, formed by life experience in general and professional in particular).
2. Motivational approach (there is a basic understanding of improving training).
3. Futuristic approach (there is a clear understanding of the scope of application of acquired knowledge in the future).
4. Prognostic approach (existing vision of the zone of the nearest development of digital competence in the pedagogical sphere, its core, and periphery);
5. Prolonged approach (there is a clear independent decision to continue training).
6. The results of scientific research cover a long period (1 year) due to the need for a detailed analysis of the zero stage of the study (March-April 2020), the intermediate stage (September-October 2020), and the final stage divided into two-time intervals (October 2020 and April 2021).

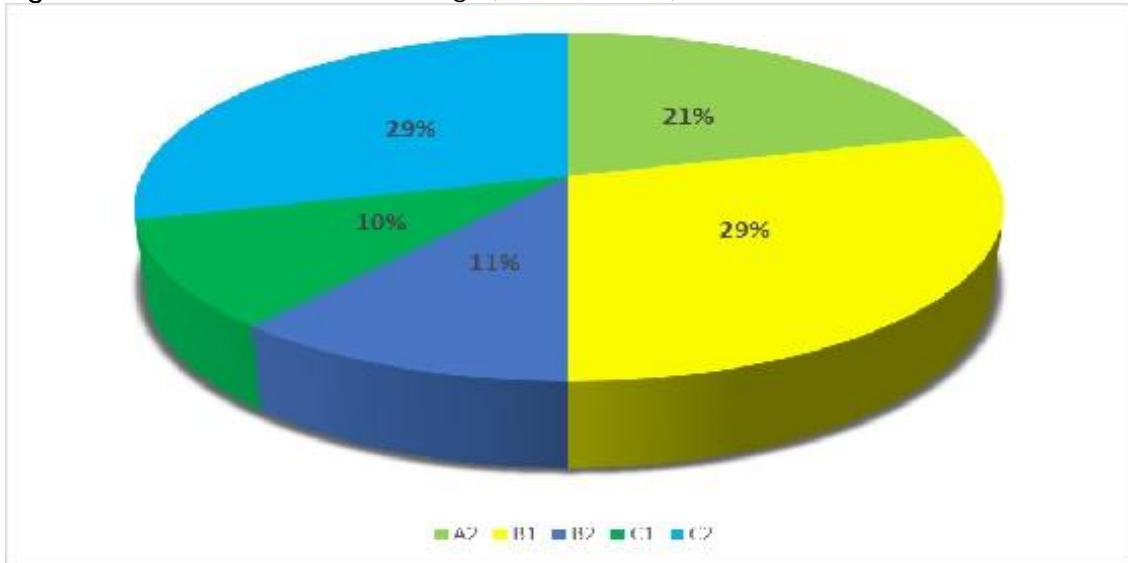
At the zero stage of empirical observation of the experience of HEIs teachers, which lasted in March-April 2020, the experiment revealed the following results of digital competence of teachers: 39% of respondents received level B2, 11% - B1, digital competence of 29% of participants has level A2, 18% of respondents have level A1 and only 3% have level A0 (Fig. 1).

Fig. 1. Results of the zero stage (March 2020)



Source: Author's diagram

Fig. 2. Results of the intermediate stage (October 2020)

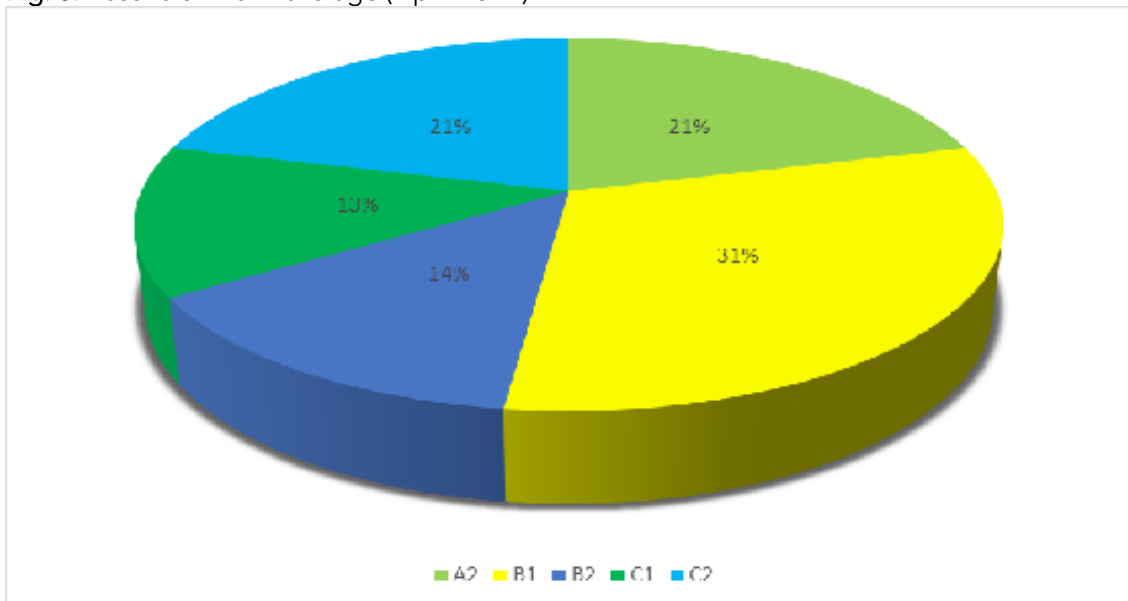


Source: Compiled by the author

At the intermediate stage of the experiment, a list of the following distance learning courses for improving digital competence was proposed for teachers: digital skills for teachers (DIA. Digital Education), courses from the Academy of Digital Development. Depending on the basic levels of digital competence and the results obtained at stage zero six months after the start of the experiment, teachers have significantly increased the level of digital competence. According to the results of the intermediate stage illustrated in Fig. 2, levels A0 and A1 disappeared (respondents of levels A0 and A1 were at level A2 with a result of 21%); respondents of level A2 moved to level B1 - 29%; teachers with level B1 received digital literacy within B2 - 11%; teachers with level B2 moved to qualitatively higher levels C1 (10%) and C2 (29%).

At the final stage of exploration (Fig. 3), lasting 7 months, which is divided into two time intervals (October 2020 and April 2021), it was determined that the levels of C1, C2, and B2 digital competence decreased in April compared to October due to constant updating of digital resources in the educational environment. The remaining levels remained unchanged.

Fig. 3. Results of the final stage (April 2021)



Source: Author's diagram

For better visualization, we present the results of the final stage of the experiment (see Table 2).

Table 2. Comparative table of the final stage results

Level	October 2020	April 2021	Positive, negative, and static transitions to lower levels
C2	29%	21%	-8%/0%
C1	10%	13%	-5%/+ 8%
B2	11%	14%	-2%/+ 5%
B1	29%	31%	0%/+ 2%
A2	21%	21%	0%

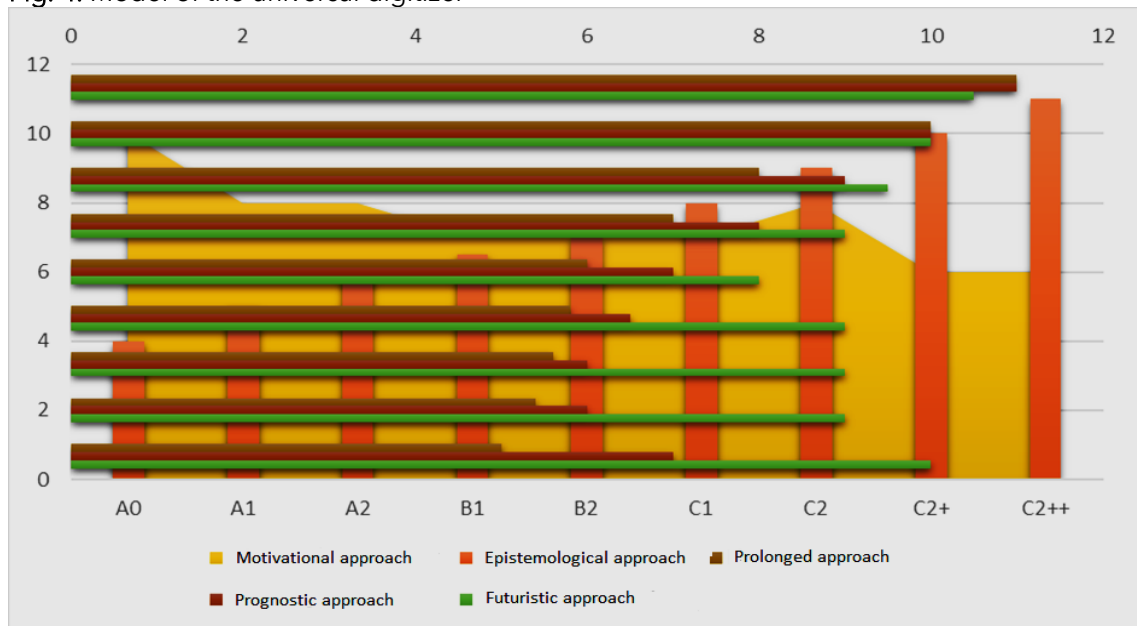
Source: Author's table

According to the results of the comparison of two-time intervals (see Table 2) of the final stage, the obtained indicators changed their numerical value:

- C2 level lost 8% of respondents, gaining 0%;
- 5% of C1 level went to B2, 8% added;
- B2 increased by 5%, decreased by 2%;
- B1 only increased by 2% without losing the previous quantitative indicator;
- A1 remained unchanged.

In this way, we understand that digital competence is one of the elements of "soft skills", which requires periodic, but continuous maintenance of relevant information in the field of digitalization. Using the statistical method of quality, a numerical indicator of the qualitative increase of digital competence among teachers of HEIs is determined. The statistical method allows stating a periodic decrease (after six months) in the level of digital literacy by 5% on average. The digitizer, created with the help of model research, will allow teachers with different levels of digital competence to increase their knowledge potential from lower to higher levels, and to detail high levels into professional paradigms (C2 +, C2 ++). The model of the universal digitizer is shown in Fig. 4.

Fig. 4. Model of the universal digitizer



Source: Author's model

The effectiveness of this model will be justified if teachers focus on the digital indicator of each level. For level A0 epistemological, motivational, futuristic, prognostic, prolonged approaches should focus on numerical indicators 4; 10; 10; 7; 5 respectively. For level A1, the following indicators should determine approaches: epistemological - 5, motivational - 8, futuristic - 9, prognostic - 6, prolonged - 5.4. Numerical indicators 6; 8; 9; 6; 5.6 - approaches for level A2. Numerical benchmarks of level B1 for approaches - 6,5; 7; 9; 6,5; 5.8. Epistemological - 7, motivational - 7, futuristic - 8, prognostic - 7, prolonged - 6 - approaches for level B2. For levels of the C group, numerical indicators should vary from 6 to 11.

DISCUSSION

Some HEIs offer courses for their staff that develop an understanding of effective combinations of pedagogical, semantic, and technological knowledge (FALLOON, 2020). Usually they are conducted as independent lectures or as comprehensive courses with subsequent mandatory assessments. Currently, low attention to technical and informational skills related to university subjects does not properly prepare students for the breadth of knowledge and opportunities needed in modern society. On this basis, the digital competence of the teacher should have a conceptual basis that derives an extended view of its significance (TDC). This understanding goes beyond the prevailing technical and literacy concepts, arguing for a more holistic and broader knowledge that recognizes the increasingly complex competencies needed by young people for ethical, safe, and productive operation in a variety of digitally mediated environments. It is important to understand the specific references to the interdisciplinary nature of digital competence and the requirement of all teachers to participate purposefully in achieving its goals.

Some researchers suggest different ways to assess the digital competence and digital literacy of university teachers and emphasize the importance of developing ICT skills. There is a certain tendency of negative correlation ($r_s = -0.396$) between digital competence and procrastination of university teachers in self-development. This demonstrates that increasing the level of digital competence reduces the level of procrastination (KOSYCHEVA et al., 2020). The proposed model of the digitizer will help to eliminate this correlation.

There are thematic explorations based on six digital competencies, including project planning, grant writing, project management, metadata, digital collection, and digital asset management. The authors represent each competency for three different stakeholder groups: personality at the beginning of a career; experienced professional; audience of professionals (O'HARA, LAPWORTH, & LAMPERT, 2020). Such a model is only partially justified for the teaching staff, so intelligence offers a redistribution of digital competence for the teacher into three levels.

Based on the experiment and interview data, the authors (JOHANNESSEN, & ØGRIM, 2020) present three different periods of training for Norwegian teachers with an emphasis on the development of professional digital competence required by national and local regulations. Then the intelligence presents a multidisciplinary training program "OsloMet", which is implemented during these three periods. Different approaches to the implementation of this program support the professional digital competence of teachers, in particular in the field of teaching methods and the use of technology. Such a model is acceptable within the proposed scientific intelligence.

The results of the research of the authors Sevillano-García, & Vázquez-Cano (2021) on the adoption, distribution, and use of digital mobile devices (tablets and smartphones) in the educational environment of HEIs allowed distinguishing ways of their use by teachers in three key areas: teaching model (face-to-face/distance), research scope, and general competencies. It is proposed to take into account the prediction, explanation, and improvement of the integration of these digital mobile devices to promote learning activities and general competencies in the context of higher education to summarize the content of the digitizer.

Research Mirete, Maquilón, Mirete, Rodríguez (2020) uses a representative sample of 186 university professors and relies on a quantitative descriptive survey method. Two

questionnaires (CEE-ACUTIC) were used. The first defined the approach to information transfer or knowledge building, and the second measured attitudes towards ICT, knowledge, and use of ICT. Based on the survey, a causal model of structural equations of maximum probability is derived. They highlighted the positive and significant relationship between the knowledge-oriented teaching approach and the use of ICT ($\beta = 0.17$, $p < 0.01$). At the same time, a statistically significant but negative relationship between the use of ICT and the educational approach focused on the transfer of information ($\beta = -0.16$, $p < 0.05$). Empirically confirmed, that the educational approach determines the use of the latest learning technologies. There are also no studies in other contexts that show a causal link between teaching approaches and digital teaching competence.

Non-experimental study (GUILLÉN-GÁMEZ, MAYORGA-FERNÁNDEZ, BRAVO-AGAPITO et al., 2020) among 81 teachers from Madrid (Spain), reports that there are statistically significant differences between knowledge and use of 2.0 tools and Moodle modules. In addition, the results found that age and gender variables affect the prediction of the level of pedagogical digital competence of the teaching staff, while the level of knowledge at which they teach does not change. The findings of this study can help develop educational interventions to improve the unfavorable digital competence of teachers.

In Malaysia (Kuala Lumpur), a quantitative design has been carried out to study the factors influencing the use of e-learning platforms (SPeCTRUM) in HEIs. The main factors in the use of digital platforms are motivation and teamwork. It was also found that the demographic factors of the participants also played a key role in the speed of using the e-learning platform (GHAVIFEKR, & MAHMOOD, 2017). The results of some studies (Guillén-Gámez, Mayorga-Fernández, & Álvarez-García, 2020) have shown that the level of digital competence and motivation to use ICT are two variables that are correlated positively, while other variables do not show any correlation, such as age.

The part of the research (INTEFJORD, & MUNTHE, 2017) focuses on the integration of professional digital competencies in and positive management. The results show that there are weak positive correlations between management and the digital competence of teachers. Stronger positive correlations exist between the effectiveness of teachers' self-assessment and digital competence. Presumably, the category of management will be explored logically in additional (variable) elements of the digitizer.

CONCLUSIONS

The study clarified the terminology of the concept of "digital competence" from different theoretical approaches. Interpretation of the concept of "digitgram" and "digitgraph" in terms of pedagogy, teaching methods, psychological point of view is absent in the scientific literature, so it may be the subject of further scientific research. Conducting a three-stage experiment to determine and increase the level of digital competence, contributed to the following changes:

- entering a new stage of levels of critical thinking of the teacher (psychological result);
- possession of current educational technologies, their active use in the educational process, building educational activities based on digital educational resources, to increase the level of high social interaction (sociological result);
- transformation of a teacher from a translator of knowledge into a competence teacher (the result of teaching methods);
- building constructive communication with all subjects of the educational process (pedagogical result).

An important area of further research is the development of author's programs to improve the digital competence of teachers based on the proposed model of a universal digitizer. The practical significance of the study was the conclusion of the model of a universal digitizer. Its results will help to implement digital competencies in the educational environment of HEIs.

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Pedagogical aspects of the development of teacher's digital competence

Aspectos pedagógicos do desenvolvimento da competência digital do professor

Aspectos pedagógicos del desarrollo de la competencia digital del profesorado

Resumo

O artigo define os critérios e níveis de manifestação da competência digital, apresenta a experiência de formar a competência digital de um professor moderno do IES. O objetivo do estudo é identificar um sistema móvel de aspectos pedagógicos, baseado no qual são formados os diagramas digitais dos professores do ISS. O artigo descreve o conceito de "competência digital" em pedagogia, sociologia, psicologia, métodos de ensino. Métodos empíricos (observação, experimento, comparação), qualitativos (cálculo estatístico) e modelagem (criação de modelos, previsão) foram utilizados para formar a base metodológica. Estabelece-se que o conceito de competência digital do professor é um elemento integral no ambiente de aprendizagem das ISS, que se baseia nos aspectos pedagógicos básicos. A importância prática dos resultados de inteligência é direcionada para a implementação das disposições do modelo digitalizador.

Palavras-chave: Pedagogia. Ensino. Competência digital. Alfabetização digital. Aspectos pedagógicos.

Abstract

The article defines the criteria and levels of manifestation of digital competence, presents the experience of forming the digital competence of a HEIs modern teacher. The purpose of the study is to identify a mobile system of pedagogical aspects, based on which the digital diagrams of HEIs teachers are formed. The article describes the concept of "digital competence" in pedagogy, sociology, psychology, teaching methods. Empirical (observation, experiment, comparison), qualitative (statistical calculation), and modeling (model creation, forecasting) methods were used to form the methodological base. It is established that the concept of digital competence of the teacher is an integral element in the learning environment of the HEIs, which is based on the basic pedagogical aspects. The practical significance of the intelligence results is directed to the implementation of the provisions of the digitizer model.

Keywords: Pedagogy. Teaching. Digital competence. Digital literacy. Pedagogical aspects.

Resumen

El artículo define los criterios y niveles de manifestación de la competencia digital, presenta la experiencia de formar la competencia digital de un profesor moderno de ITI. El objetivo del estudio es identificar un sistema móvil de aspectos pedagógicos, en base al cual se forman los diagramas digitales de los profesores de HEIs. El artículo describe el concepto de "competencia digital" en pedagogía, sociología, psicología, métodos de enseñanza. Se utilizaron métodos empíricos (observación, experimento, comparación), cualitativos (cálculo estadístico) y modelado (creación de modelos, previsión) para formar la base metodológica. Se establece que el concepto de competencia digital del profesor es un elemento integral en el entorno de aprendizaje de las ITI, que se basa en los aspectos pedagógicos básicos. La importancia práctica de los resultados de inteligencia se dirige a la implementación de las disposiciones del modelo digitalizador.

Palabras-clave: Pedagogía. Enseñanza. Competencia digital. Alfabetización digital. Aspectos pedagógicos.