



REVISTA INCLUSIONES

TRABAJO EN EQUIPO SIN FRONTERAS

Revista de Humanidades y Ciencias Sociales

Volumen 7 . Número Especial

Octubre / Diciembre

2020

ISSN 0719-4706

CUERPO DIRECTIVO

Director

Dr. Juan Guillermo Mansilla Sepúlveda
Universidad Católica de Temuco, Chile

Editor

OBU - CHILE

Editor Científico

Dr. Luiz Alberto David Araujo
Pontificia Universidade Católica de Sao Paulo, Brasil

Editor Europa del Este

Dr. Aleksandar Ivanov Katrandzhiev
Universidad Suroeste "Neofit Rilski", Bulgaria

Cuerpo Asistente

Traductora: Inglés

Lic. Pauline Corthorn Escudero
Editorial Cuadernos de Sofía, Chile

Portada

Lic. Graciela Pantigoso de Los Santos
Editorial Cuadernos de Sofía, Chile

COMITÉ EDITORIAL

Dra. Carolina Aroca Toloza
Universidad de Chile, Chile

Dr. Jaime Bassa Mercado
Universidad de Valparaíso, Chile

Dra. Heloísa Bellotto
Universidad de Sao Paulo, Brasil

Dra. Nidia Burgos
Universidad Nacional del Sur, Argentina

Mg. María Eugenia Campos
Universidad Nacional Autónoma de México, México

Dr. Francisco José Francisco Carrera
Universidad de Valladolid, España

Mg. Keri González
Universidad Autónoma de la Ciudad de México, México

Dr. Pablo Guadarrama González
Universidad Central de Las Villas, Cuba

Mg. Amelia Herrera Lavanchy
Universidad de La Serena, Chile

Mg. Cecilia Jofré Muñoz
Universidad San Sebastián, Chile

Mg. Mario Lagomarsino Montoya
Universidad Adventista de Chile, Chile

Dr. Claudio Llanos Reyes
Pontificia Universidad Católica de Valparaíso, Chile

Dr. Werner Mackenbach
Universidad de Potsdam, Alemania
Universidad de Costa Rica, Costa Rica

Mg. Rocío del Pilar Martínez Marín
Universidad de Santander, Colombia

Ph. D. Natalia Milanesio
Universidad de Houston, Estados Unidos

Dra. Patricia Virginia Moggia Münchmeyer
Pontificia Universidad Católica de Valparaíso, Chile

Ph. D. Maritza Montero
Universidad Central de Venezuela, Venezuela

Dra. Eleonora Pencheva
Universidad Suroeste Neofit Rilski, Bulgaria

Dra. Rosa María Regueiro Ferreira
Universidad de La Coruña, España

Mg. David Ruete Zúñiga
Universidad Nacional Andrés Bello, Chile

Dr. Andrés Saavedra Barahona
Universidad San Clemente de Ojrid de Sofía, Bulgaria

Dr. Efraín Sánchez Cabra
Academia Colombiana de Historia, Colombia

Dra. Mirka Seitz
Universidad del Salvador, Argentina

Ph. D. Stefan Todorov Kapralov
South West University, Bulgaria

COMITÉ CIENTÍFICO INTERNACIONAL

Comité Científico Internacional de Honor

Dr. Adolfo A. Abadía

Universidad ICESI, Colombia

Dr. Carlos Antonio Aguirre Rojas

Universidad Nacional Autónoma de México, México

Dr. Martino Contu

Universidad de Sassari, Italia

Dr. Luiz Alberto David Araujo

Pontificia Universidad Católica de Sao Paulo, Brasil

Dra. Patricia Brogna

Universidad Nacional Autónoma de México, México

Dr. Horacio Capel Sáez

Universidad de Barcelona, España

Dr. Javier Carreón Guillén

Universidad Nacional Autónoma de México, México

Dr. Lancelot Cowie

Universidad West Indies, Trinidad y Tobago

Dra. Isabel Cruz Ovalle de Amenabar

Universidad de Los Andes, Chile

Dr. Rodolfo Cruz Vadillo

Universidad Popular Autónoma del Estado de Puebla, México

Dr. Adolfo Omar Cueto

Universidad Nacional de Cuyo, Argentina

Dr. Miguel Ángel de Marco

Universidad de Buenos Aires, Argentina

Dra. Emma de Ramón Acevedo

Universidad de Chile, Chile

Dr. Gerardo Echeita Sarrionandia

Universidad Autónoma de Madrid, España

Dr. Antonio Hermosa Andújar

Universidad de Sevilla, España

Dra. Patricia Galeana

Universidad Nacional Autónoma de México, México

Dra. Manuela Garau

Centro Studi Sea, Italia

Dr. Carlo Ginzburg Ginzburg

Scuola Normale Superiore de Pisa, Italia

Universidad de California Los Ángeles, Estados Unidos

Dr. Francisco Luis Girardo Gutiérrez

Instituto Tecnológico Metropolitano, Colombia

José Manuel González Freire

Universidad de Colima, México

Dra. Antonia Heredia Herrera

Universidad Internacional de Andalucía, España

Dr. Eduardo Gomes Onofre

Universidade Estadual da Paraíba, Brasil

Dr. Miguel León-Portilla

Universidad Nacional Autónoma de México, México

Dr. Miguel Ángel Mateo Saura

Instituto de Estudios Albacetenses "Don Juan Manuel", España

Dr. Carlos Tulio da Silva Medeiros

Diálogos em MERCOSUR, Brasil

+ Dr. Álvaro Márquez-Fernández

Universidad del Zulia, Venezuela

Dr. Oscar Ortega Arango

Universidad Autónoma de Yucatán, México

Dr. Antonio-Carlos Pereira Menaut

Universidad Santiago de Compostela, España

Dr. José Sergio Puig Espinosa

Dilemas Contemporáneos, México

Dra. Francesca Randazzo

Universidad Nacional Autónoma de Honduras, Honduras

Dra. Yolando Ricardo

Universidad de La Habana, Cuba

Dr. Manuel Alves da Rocha

Universidade Católica de Angola Angola

Mg. Arnaldo Rodríguez Espinoza

Universidad Estatal a Distancia, Costa Rica

Dr. Miguel Rojas Mix

*Coordinador la Cumbre de Rectores Universidades
Estatales América Latina y el Caribe*

Dr. Luis Alberto Romero

CONICET / Universidad de Buenos Aires, Argentina

Dr. Maura de la Caridad Salabarría Roig

Dilemas Contemporáneos, México

Dr. Adalberto Santana Hernández

Universidad Nacional Autónoma de México, México

Dr. Juan Antonio Seda

Universidad de Buenos Aires, Argentina

Dr. Saulo Cesar Paulino e Silva

Universidad de Sao Paulo, Brasil

Dr. Miguel Ángel Verdugo Alonso

Universidad de Salamanca, España

Dr. Josep Vives Rego

Universidad de Barcelona, España

Dr. Eugenio Raúl Zaffaroni

Universidad de Buenos Aires, Argentina

Dra. Blanca Estela Zardel Jacobo

Universidad Nacional Autónoma de México, México

Comité Científico Internacional

Mg. Paola Aceituno

Universidad Tecnológica Metropolitana, Chile

Ph. D. María José Aguilar Idañez

Universidad Castilla-La Mancha, España

Dra. Elian Araujo

Universidad de Mackenzie, Brasil

Mg. Romyana Atanasova Popova

Universidad Suroeste Neofit Rilski, Bulgaria

Dra. Ana Bénard da Costa

*Instituto Universitario de Lisboa, Portugal
Centro de Estudios Africanos, Portugal*

Dra. Alina Bestard Revilla

*Universidad de Ciencias de la Cultura Física y el Deporte,
Cuba*

Dra. Noemí Brenta

Universidad de Buenos Aires, Argentina

Ph. D. Juan R. Coca

Universidad de Valladolid, España

Dr. Antonio Colomer Vialdel

Universidad Politécnica de Valencia, España

Dr. Christian Daniel Cwik

Universidad de Colonia, Alemania

Dr. Eric de Léséulec

INS HEA, Francia

Dr. Andrés Di Masso Tarditti

Universidad de Barcelona, España

Ph. D. Mauricio Dimant

Universidad Hebrea de Jerusalén, Israel

Dr. Jorge Enrique Elías Caro

Universidad de Magdalena, Colombia

Dra. Claudia Lorena Fonseca

Universidad Federal de Pelotas, Brasil

Dra. Ada Gallegos Ruiz Conejo

Universidad Nacional Mayor de San Marcos, Perú

Dra. Carmen González y González de Mesa

Universidad de Oviedo, España

Ph. D. Valentin Kitanov

Universidad Suroeste Neofit Rilski, Bulgaria

Mg. Luis Oporto Ordóñez

Universidad Mayor San Andrés, Bolivia

Dr. Patricio Quiroga

Universidad de Valparaíso, Chile

Dr. Gino Ríos Patio

Universidad de San Martín de Porres, Perú

Dr. Carlos Manuel Rodríguez Arrechavaleta

Universidad Iberoamericana Ciudad de México, México

Dra. Vivian Romeu

Universidad Iberoamericana Ciudad de México, México

**REVISTA
INCLUSIONES** M.R.
REVISTA DE HUMANIDADES
Y CIENCIAS SOCIALES

Dra. María Laura Salinas
Universidad Nacional del Nordeste, Argentina

Dr. Stefano Santasilia
Universidad della Calabria, Italia

Mg. Silvia Laura Vargas López
Universidad Autónoma del Estado de Morelos, México

**CUADERNOS DE SOFÍA
EDITORIAL**

Dra. Jaqueline Vassallo
Universidad Nacional de Córdoba, Argentina

Dr. Evandro Viera Ouriques
Universidad Federal de Río de Janeiro, Brasil

Dra. María Luisa Zagalaz Sánchez
Universidad de Jaén, España

Dra. Maja Zawierzeniec
Universidad Wszechnica Polska, Polonia

Editorial Cuadernos de Sofía
Santiago – Chile
OBU – CHILE

Indización, Repositorios y Bases de Datos Académicas

Revista Inclusiones, se encuentra indizada en:





REX



UNIVERSITY OF
SASKATCHEWAN



Universidad
de Concepción



BIBLIOTECA UNIVERSIDAD DE CONCEPCIÓN

**DIGITAL EDUCATIONAL ENVIRONMENT AS A SYSTEM-FORMING
ELEMENT OF DIGITAL DIDACTICS**

Ph. D. Olena Sagan

Kherson State University, Ukraine
ORCID ID: <https://orcid.org/0000-0002-3195-3686>
evsagan777@gmail.com

Ph. D. Yaroslav Nahrybelniy

Kherson State Maritime Academy, Ukraine
ORCID ID: <https://orcid.org/0000-0003-3266-5798>
innanagribelna@gmail.com

Dr. Inna Nahrybeina

Kherson State Maritime Academy, Ukraine
ORCID ID: <https://orcid.org/0000-0001-6393-3754>
innanagribelna@gmail.com

Dr. Valentyna Fediaieva

Kherson State University, Ukraine
ORCID ID: <https://orcid.org/0000-002-8658-1885>
valentina.fediaieva@gmail.com

Dr. Natalia Liba

Mukachevo State University, Ukraine
ORCID ID: <https://orcid.org/0000-0001-7053-8859>
n.liba@mail.msu.edu.ua

Ph. D. Natalia Kabelnikova

Kherson State University, Ukraine
ORCID ID: <https://orcid.org/0000-0002-5236-2033>
nataliavm09@gmail.com

Fecha de Recepción: 14 de junio de 2020 – **Fecha Revisión:** 24 de junio de 2020

Fecha de Aceptación: 28 de septiembre 2020 – **Fecha de Publicación:** 01 de octubre de 2020

Abstract

Digitization in education is one of the most actual issues in modern society. COVID-19 pandemic and connected with it lockdown showed the necessity of an urgent transition of educational processes of different levels to a mixed or distant education. Such changes in paradigm do not suggest the digitalization of the traditional content, but the creation of an educational system based on digital didactic principles. The article deals with the problem of designing, creation and testing of digital educational environment. The analysis of the researches enables to define the notion 'digital educational environment' and identify its components. The conducted questionnaire of 132 university and college teachers in Ukraine, who provided distant education during COVID-19 lockdown, demonstrated a positive qualitative increase of motivation criterion for the formation and application of all the components of digital educational environment, and allowed to identify the main problems, tackling of which is possible due to synergy of the state, science and system of education.

Keywords

Digital didactics – Digital educational environment – Teacher's digital competence

Para Citar este Artículo:

Sagan, Olena; Nahrybelniy, Yaroslav; Nahrybeina, Inna; Fediaieva, Valentyna; Liba, Natalia y Kabelnikova, Natalia. Digital educational environment as a system-forming element of digital didactics. Revista Inclusiones Vol: 7 num Especial (2020): 282-290.

Licencia Creative Commons Attribution Non-Comercial 3.0 Unported
(CC BY-NC 3.0)
Licencia Internacional



Introduction

In the epoch of digital technologies humanity provided plenty of opportunities for new qualitative ways of acquiring and sharing information, communicating without barriers, acquiring knowledge at the appropriate time and in appropriate place. At the same time, there arose serious challenges connected with the readiness to use these benefits since early childhood, with the search for the effective strategies of information management, formation of a new way of thinking, manner of behavior and activity.

The deformation of the worldview among youth connected with the use of digital resources: information acceleration; clip-thinking; stable sensory hunger; loss of the line of reality etc. has become obvious. Modern researches state the fact that students in most cases surpass their teachers in the level of knowledge and ability to use various digital applications and resources. On one hand, the pandemic situation in 2020 disclosed the problem of sluggishness of a traditional education, on the other hand – it served as a strong impetus for the formation of new requirements for teachers' classification, the search for the effective means and methods of modernization of the whole system of education. In recent years the investigations of the scientists¹ prove the necessity not only to digitalize traditional content, methods and means, but to build a new theory of education, in which digital educational environment is a system-forming center. This theory is known as 'digital didactics' and is defined as 'a section of pedagogics which studies principles, methods, means and organizational forms of education in the context of information educational environment'². The absence of a unified interpretation and approaches to designing of digital educational environment determined the choice of the theme of our paper.

Literature review

In the modern conditions of digitization of all aspects of human life the creation of a single information space as a new human environment, called by K.Kolin³ an automated info-sphere, has become relevant.

The scientist determines the main components of this space:

- 1) resources: documents stored in database, digital libraries, resource facilities;
- 2) community: a totality of individual and collective subjects – information generators and consumers;
- 3) infrastructure: legal and regulatory, economical frameworks of informational activity, repository of information, technologies of its processing and transmission (including digital one);

¹ M. Choshanov, "E-didactics: A new look at the theory of learning in the digital age", *Educational technology and society* Vol: 4 (2013): 684-696; E. Smyrnova-Trybulska, "Technologie informacyjno-komunikacyjne i e-learning we współczesnej edukacji" in *Information and Communication Technologies and E-learning in Contemporary Education* In E. Smyrnova-Trybulska (ed.) (Katowice: Wydawnictwo Uniwersytetu Śląskiego, 2019), 54-58; O. Sagan; S. Yakovleva; E. Anisimova; A. Balokha y H. Yeremenko, "Digital didactics as a new model in the theory of education", *Revista Inclusiones* Vol: 7 num Especial (2020): 193-204 y V. Monakhov, School of V. Monakhov (Moscow: Moscow State University for the Humanities, 2019).

² O. Sagan; S. Yakovleva; E. Anisimova; A. Balokha; H. Yeremenko, "Digital didactics..."

³ K. Colin & A. Ursul, *Information and culture. Introduction to information cultural studies* (Moscow: Publishing house "Strategic Priorities", 2015), 288.

4) activity: production of service and products with the use of informational resources and digital technologies.

Educational environment is a part and indicator of the efficiency of a single information space and, according to T.Meng⁴, is structured by surrounding, conditions and influence. In dictionaries the phenomenon under investigation is defined as a collaboration of elements, systems, subjects of an educational process.

The analysis of the investigations of this issue enables to define the notion 'digital educational environment' as:

- a single information space of an educational establishment that combines administrative, economic, information, library, organization subsystems, as well as a knowledge control and statistic subsystems⁵;
- systems that accumulate teaching, organizational, technical resources and intellectual capacity of a higher educational establishment⁶;
- an open combination of informational systems, aiming at realizing different tasks of an educational process⁷;
- a result of transformation of education in the process of informatization⁸;
- a set of resources organized in a special way (with a necessary methodological, technological, technical support), that are used for teaching and management of an educational process presented in digital format⁹;
- a set of conditions aimed at forming human subjectivity, developing the ability to work in a multi-factor dynamic environment in the conditions of interaction on various levels¹⁰;
- a system of conditions and possibilities for education, development, socialization, human upbringing¹¹.

Proposed methodology

In the process of investigation such theoretical and empirical methods were used: analysis and synthesis of European scientific resources; comparison of structural elements of classical and digital didactics; questioning of higher educational establishment teachers;

⁴ T. Meng, Study of the educational environment: problems, approaches, models (St. Petersburg: Publishing House of Russian State Pedagogical University named after A. I. Herzen, 2011).

⁵ O. Il'chenko, "Organizational and pedagogical conditions for the development and application of network resources in the educational process" (PhD, Moscow State Technological Academy, 2002).

⁶ I. Zakharova, "Formation of information educational environment higher education institution" (PhD, Tyumen State university, 2003).

⁷ E. Vovk, Methodological foundations of the formation of a modern digital educational environment (Nizhny Novgorod: NOO "Professional Science", 2018), 45.

⁸ A. Danilyuk y A. Kondakov, The concept of the Basic competence model of the digital economy Retrieved from: <http://www.ranepa.ru/images/anons/2018-12/Konceosiya-bmkce.pdf>, (25.04.2020)

⁹ A. Biankina, "Digital technologies and their role in the modern economy", Economy and society: modern models of development Vol: 16 (2017) y M. Vaindorf-Sysoeva & M. Subocheva, "Digital education" as a system-forming category: approaches to the definition", Bulletin of the MSEU num 3 (2018).

¹⁰ A. Budarina & O. Loksha, "Use of electronic portfolio in the system of teacher education as an element of the organization of the digital educational environment", Bulletin of the Baltic Federal University named after I. Kant. Series: Philology, pedagogy, psychology num 4 (2018).

¹¹ V. Blinov; M. Dulinov; E. Yesenin y I. Sergeev, The project of the didactic concept of digital vocational education and training (Moscow: Publishing House "Pero", 2019).

analysis of the obtained results. While carrying out netnographical research, we used the method of studying of web-sites of Ukrainian universities that train future teachers.

Result analysis

To elaborate criteria and efficiency indicators of digital educational environment one should define the tasks and expected results. From our point of view, the main of them are: the quality of students' learning and skills formation by means of increasing opportunities for constructing of educational tendencies and access to the most modern educational resources; reduction of the period of obtaining educational results; teacher's deliverance from routine actions through its automatization for a productive creative activity.

The principles of digital educational environment are as follows:

1. openness, i.e. the provision of an opportunity and right to use different informational systems in its structure, transform them or add new one on your own initiative;
2. coherence, i.e. the use of digital technologies in a single educational and technological context;
3. accessibility, i.e. the provision of an opportunity of an unrestricted (commercial and non-commercial) operation of the resources with the help of the Internet;
4. adequacy, i.e. the correspondence of the completeness of the educational environment to the goals, demands and opportunities of the consumers of educational services;
5. optimality, i.e. the improvement of the educational results; reduction of consumer's labour and time costs due to new opportunities.

Among the main structural elements of digital educational environment we define technologies, resources and types of activity in their correlation (Fig.1).

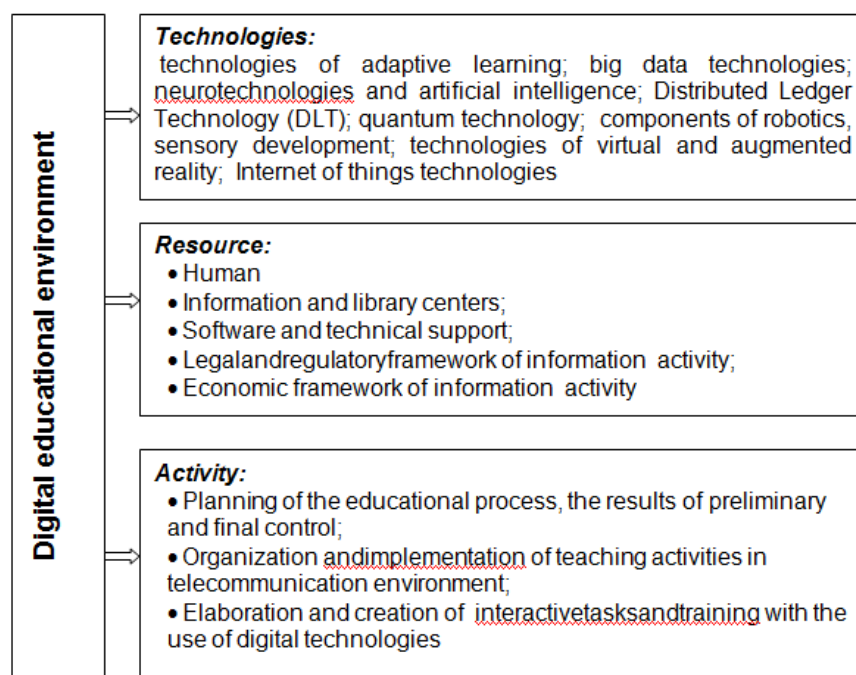


Fig. 1

Structural model of digital educational environment

The result of previous researches proved that only 5 % of teachers of pedagogical universities in Ukraine worked at the creation and promotion of an effective educational environment with digital content, a system of tasks on different levels and a developed feedback. This demonstrated a low level of teacher’s digital competence. The pandemic situation and a forced lockdown 2020 improved considerably these results. Moreover, pedagogical community has dramatically changed its attitude to digitalization of education, defining not only their digital competences but also presence of qualitative infrastructure and modern resources as necessary conditions for the viability of educational environment (Fig.2).

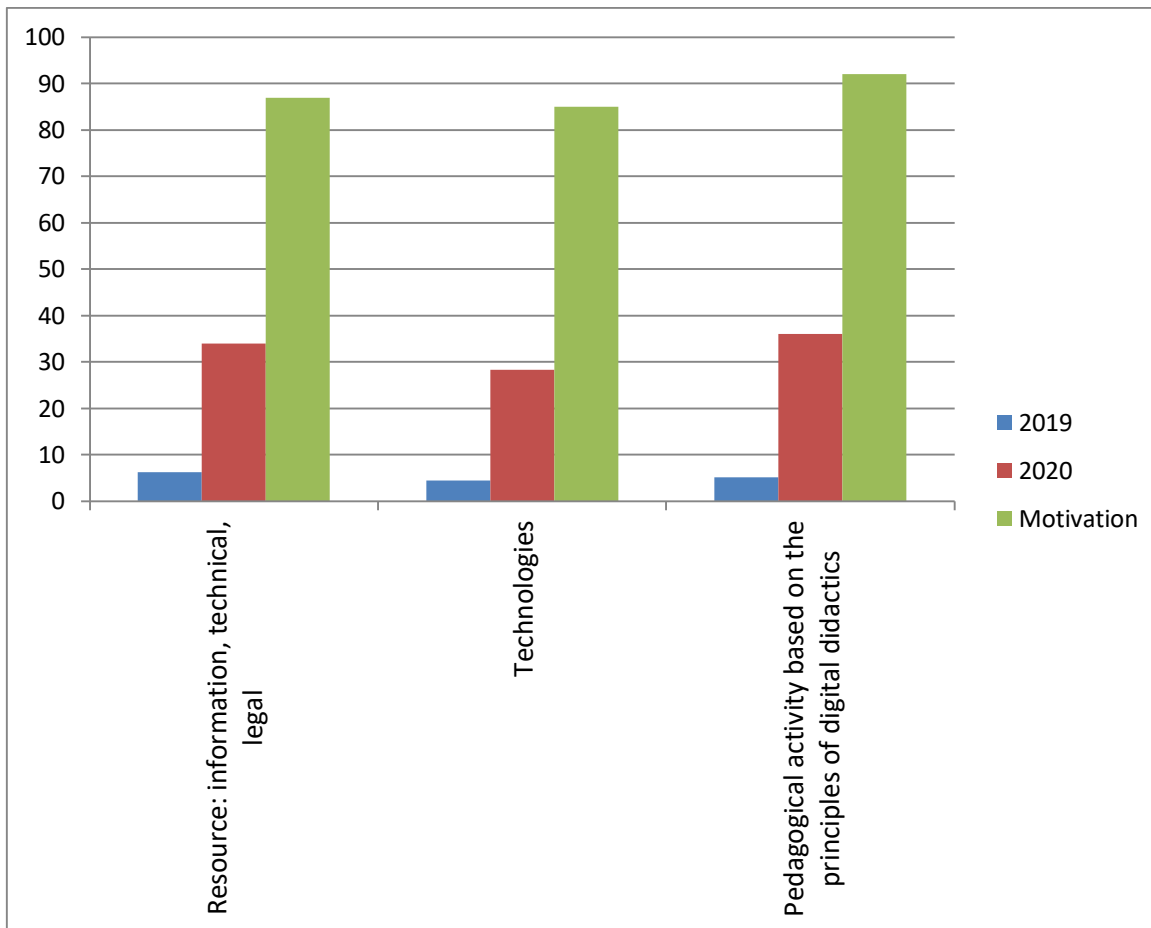


Fig. 2
Dynamics of evaluation of digital educational environment by teachers

Data presented in Fig.2 were acquired as a result of questionnaire of 132 university and college teachers in Ukraine. The great majority of them accept the changes and reconsideration of the current educational process that implies an optimal alternation and correlation of online and offline processes during professional education; motivation of students’ teaching activity and self-sufficiency by means of rich virtual reality in order to support their readiness in solving more complex tasks.

The main task of digital educational environment is the increasing of opportunities for the construction of an individual educational strategy by means of adaptive navigation within teaching material, formation of interaction with an individual user for the adaptation of

teaching material according to his needs, adaptive testing. Such an approach makes it possible to meet the demands of students with different goals, motivation, level of knowledge and experience.

The evaluation of digital educational environment efficiency is possible through its approbation. The organization of distant education during COVID-19 lockdown helped to identify the problems that appear during the process of creating and using of the environment, in addition to getting technological experience by teachers. The questionnaire of the same respondents led to the generalization of the obtained results (Table 1).

Aspects of educational environment	Teacher's task	Problem
Learning self-sufficiency	Organization of the activity taking into account students' goal setting, strict time limits and estimation of educational results	Digital resources with the opportunity of motivation to obtain an educational result, qualitative feedback, adaptive testing at each stage of learning
Content	Distribution of the material according to the principle offline + online	Selection of a digital resource, the use of which improves the quality of learning the material in comparison with traditional one
Technologies	Use of pedagogical technologies based on the students' personal activity	Approbation of digital didactic technologies
Social mechanisms	Search for group training methods to develop teamwork qualities and culture of constructive interaction	Digital resources which provide competitiveness, cooperation, peer learning and reciprocal evaluation
Results	A regular individual feedback on all the actions	Digital resources which help to organize individual strategies in accordance with student's personal rate and willingness, his opportunity to estimate own achievements subjectively (the amount of time, efforts, knowledge needed for achieving the results, how much he/she succeeded in proving him-/herself).

Table 1
Questionnaire results

These results define the goals for designing and realization of educational environment: improvement of material and technical resources for synchronization and consolidation of resources of all subjects of network interaction; extension of the range of educational services, including a wide use of digital resources; increasing the level of teachers' professional competence for the creation and promotion of methodically useful content.

Conclusion

A qualitative increase of motivation criterion for the formation and application of all the components of digital educational environment helps us to define primary tasks, the realization of which is possible due to synergy of the state, science and system of education.

1. Overcoming of technical inequality among the subjects of educational process on the level of state and educational establishments: broadband Internet availability, digital gadgets for all the students, technical support.

2. Promotion of modern digital educational resources as an environment for digital educational content designing, organizing of quality communication, using of tools during educational process.

3. Elaboration and mastering of big data technologies; neurotechnologies and artificial intelligence; Distributed Ledger Technology (DLT); robotics, sensory development; technologies of virtual and augmented reality; Internet of things technologies, etc.

4. Increasing the level of teachers' digital competence at all stages (university and postgraduate education, informal self-education, etc.)

The understanding of the fact that humanity faces a new challenge and perspective of the organization of a new type of educational processes, forced scientists to provide in the short term theoretical foundation and certain instructions for the improvement of digital educational environment.

References

Biankina, A. "Digital technologies and their role in the modern economy". *Economy and society: modern models of development* Vol: 16 (2017): 15-25.

Blinov, V. I.; Dulinov, M. V.; Yesenina, E. Yu. & Sergeev, I. S. *The project of the didactic concept of digital vocational education and training*. Moscow: Publishing House "Pero". 2019.

Budarina, A. & Loksha, O. "Use of electronic portfolio in the system of teacher education as an element of the organization of the digital educational environment". *Bulletin of the Baltic Federal University named after I. Kant. Series: Philology, pedagogy, psychology*. Vol: 4 (2018): 87–95.

Choshanov, M. "E-didactics: A new look at the theory of learning in the digital age". *Educational technology and society* Vol: 4 (2013): 684-696.

Colin, K. K. & Ursul, A. D. *Information and culture. Introduction to information cultural studies*. Moscow: Publishing house "Strategic Priorities". 2015.

Danilyuk, A. & Kondakov, A. *The concept of the Basic competence model of the digital economy* Retrieved from: <http://www.ranepa.ru/images/anons/2018-12/Konceosiya-bmkce.pdf>, (25.04.2020)

Il'chenko, O. "Organizational and pedagogical conditions for the development and application of network resources in the educational process". PhD, Moscow State Technological Academy. 2002.

Meng, T. Study of the educational environment: problems, approaches, models. St. Petersburg: Publishing House of Russian State Pedagogical University named after A.I. Herzen. 2011.

Sagan, O; Yakovleva, S.; Anisimova, E.; Balokha, A. y Yeremenko, H. "Digital didactics as a new model in the theory of education". Revista Inclusiones Vol: 7 num Especial (2020): 193-204.

Monakhov, V. School of V. Monakhov. Moscow: Moscow State University for the Humanities. 2019. Retrieved from: http://www.instrao.ru/images/1Treshka/Nauchnye_shkoli/Monahov/Avtorskaya_shkola_VM_Monakhova_Strategi_191117.pdf

Smyrnova-Trybulska, E. "Technologie informacyjno-komunikacyjne i e-learning we współczesnej edukacji" in Information and Communication Technologies and E-learning in Contemporary Education In E. Smyrnova-Trybulska (ed.). Katowice: Wydawnictwo Uniwersytetu Śląskiego. 2019. 54-572.

Vaindorf-Sysoeva, M. & Subocheva, M. "Digital education" as a system-forming category: approaches to the definition". Bulletin of the MSEU, num 3 (2018): 25–36.

Vovk, E. Methodological foundations of the formation of a modern digital educational environment. Nizhny Novgorod: NOO "Professional Science". 2018.

Zakharova, I. "Formation of information educational environment higher education institution". Ph. D. Tyumen State university. 2003.



МУКАЧІВСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ

89600, м. Мукачево, вул. Ужгородська, 26

тел./факс +380-3131-21109

Веб-сайт університету: www.msu.edu.ua

E-mail: info@msu.edu.ua, pr@mail.msu.edu.ua

Веб-сайт Інституційного репозитарію Наукової бібліотеки МДУ: <http://dspace.msu.edu.ua:8080>

Веб-сайт Наукової бібліотеки МДУ: <http://msu.edu.ua/library/>