Digital Technologies As A Constituent of the Methodical System of Developing Legal Competence of Economic Colleges Pedagogical Staff

Roman Kurok †, Anatoliy Hritchenko ††, Borys Shevel †††, Stanislav Marchenko††††, Oleksandr Deshchenko†††††

† Candidate of Juridical Sciences, Associate Professor, Institute of Vocational Education and Training of National Academy of Educational Sciences of Ukraine, 98a, Vito-Litovsky Lane, 03045, Kyiv, Ukraine;
†† Doctor of Pedagogical Sciences, Professor of the Professional Education and Profiles Technologies Chair, Pavlo Tychyna Uman State Pedagogical University, 2 Sadova Str., 20300, Uman, Ukraine;
††† Candidate of Pedagogical Sciences, Associate Professor, Oleksandr Dovzhenko Hlukhiv National Pedagogical University, 54 Kyevo Moskovska Str., 41400 Hlukhiv, Ukraine;
†††† Candidate of Pedagogical Sciences, Seniour teacher, Oleksandr Dovzhenko Hlukhiv National Pedagogical University, 54 Kyevo Moskovska Str., 41400 Hlukhiv, Ukraine;
††††† Candidate of Pedagogical Sciences, Seniour teacher, Oleksandr Dovzhenko Hlukhiv National Pedagogical University, 54 Kyevo Moskovska Str., 41400 Hlukhiv, Ukraine.

Summary
The classical methodical system is a structure which components are made of goals, content, methods, forms and means of teaching. The article suggests modernizing the existing (five-component) classical structure of the methodical system of legal competence of economic colleges teavhing staff by introducing the component of "digital technologies" as they significantly change, modernize, improve the system components, provide them with the other content and functional properties.

Keywords:
methodical system, components, digitalization, digital technologies, pedagogical staff.

1. Introduction.

The present is characterized by rapid digitization – introducing digital technologies in all the spheres of life: from interaction between people to industrial production, from household items to children's toys, clothing, etc. This is the transition of biological and physical systems to cyberbiological and cyberphysical ones, from the real world to the virtual world (online) [1]. According to the analytical reports from the Davos Economic Forum, digital technologies are the "Internet of things, robotics and cybersystems, artificial intelligence, big data, paperless technologies, additive technologies (3D printing), cloud and fog calculations, unmanned and mobile technologies, biometric, quantum technologies, identification technologies, blockchain, etc."[1]. We consider it expedient to list the types of modern digital technologies pointed out by the specialists of the Ukrainian Institute for the Future in the "Strategy for the development of the digital economy" (Fig. 1) [1].

In our opinion, L. Osadcha reasonably notes [2] that electronic (distance) education is becoming a dominant form in education, training, professional development of specialists in the workplace. These conclusions of the scientist confirm the results of the study conducted in the domestic companies (2018, 312 companies, different regions of Ukraine) by the International Personnel Portal *hh.ua.* The experts found that one in nine company out of ten had automated their HR processes. A significant share of mobile digital technologies are social networks (29%), job sites (23%), online tools for assessing candidates (5%). As for cloud technologies they are used much less – only 4% use the cloud one, and the monitoring systems of mentioning the company in the media and Big Data have 3% and 2% respectively.

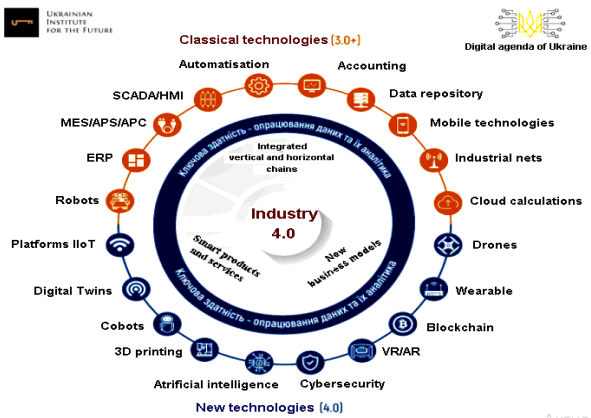

Fig. 1. Key technologies of educational transformations [1]

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Regarding the use of digital technologies in education, we should agree with M. Tolmachwho said that nowadays the most promising in the training of professionals (and hence in training teachers and research-teaching staff) are the training programmes based on deep immersion in the professional environment (in case of higher education); cloud technologies focused on the integration of various information resources within the topic, scientific field, section of the curriculum in order to simplify their use, the implementation of various design work in the cloud; blockchain technologies to automate or increase the efficiency of the components of the educational process; BYOD-technology (Bring your own devices) – technology stimulating the use of students' own gadgets (smartphones, laptops, tablets, etc.), which are used to organize the implementation of educational tasks; VR-, AR-technological-digital platform: information technologies in the socio-cultural sphere, involving the use of virtual worlds and simulations; digital control and self-control technologies; technologies designed to create new methods of transmitting educational information to students, etc. [3, p. 161].

Following the ideas of M. Tolmach, O. Koshuk and P. Luzan point out [4] that modern digital technologies allow those who study (at any time, extraterritorially in the geographical space) to quickly access scientific, educational or other information in its modern interpretation; effectively carry out self-education; apply the latest technologies in modelling processes and phenomena; quickly and efficiently process statistical data; obtain and provide necessary pieces of advice in time, in particular with the use of Skype-technologies; take an active part in Internet conferences, seminars, webinars, telecommunication projects, discuss problems with experts at forums, remotely participate in meetings of scientists; use digital technologies for training testing, etc.

Thus, digital technologies change the very process of acquiring knowledge, and, consequently, the construct of the classical (five-component) methodical system. It is said that today the process of developing the legal competence of teachers probably can not be carried out without modern digital technologies. On the one hand, neglecting this circumstance can lead to the destruction of the methodical system as a whole structure in general. On the other hand, digital technologies significantly change, modernize, improve the components of the methodical system, give them the other semantic and functional properties.

2. Theoretical consideration.

Therefore, taking into account the above mentioned provisions, we must modernize the existing (five-component) classical structure of the methodical system by introducing a component of "digital technology". It should be reminded that the concept of structure (*Lat. structura — building, placement, order)* reflects the following important characteristics of the system: 1) composition (how many and what components it consists of); 2) the method of interaction of components. As it was mentioned above, the nature of their connections and the success of achieving the goals and objectives of the development of teachers' legal competence depends on the components of the methodical system, their functional properties. The attention should be focused on the changes caused by introducing digital technologies into modern educational practice.

There is no doubt that digital technologies have rapidly changed the modern educational process. This aspect should be considered in terms of changing the functional and semantic properties of the main components of the methodical system – methods, forms, content, tools, etc., the development of legal competence of economic colleges teachers'. First of all, digital technologies significantly integrate verbal (lecture method, explanation, story, conversation, information message, etc.) and visual (demonstration, illustration, self-observation) methods, which significantly increases the effectiveness of educational material. Scientists state that a person gets 87% of information through sight, 40% by memorizing; 20% of what is heard is remembered; 80% of information is memorized from both heard and seen content. Besides, when using audiovisual media in teaching, 50% of information is engraved in human memory, and the time of acquiring knowledge is reduced by 20–40% [5].

It is quite natural that before introducing digital technologies into the educational process, pedagogical practice used both verbal and visual methods, because visual cognition is genetically ahead of verbal. In its turn, pedagogical science has developed the four following ways of combining words and visual aids. In particular, the *heuristic-anticipatory* method is a way of teaching in which students, according to the instructions of the teacher, independently study phenomena, processes, educational objects, and then verbally anticipate each fragment of the visual aid demonstration; in the *heuristic-explanatory* way of combining words and visual aids, the verbal analysis of each stage of demonstration is performed exclusively by students immediately after the demonstration. For example, when mastering the topic "Constitutional basics of Ukraine" [6], the teacher first shows the slide "Human rights" (Fig. 2), listing only the types of rights – civil, social, economic, political, informational, cultural, ecological.

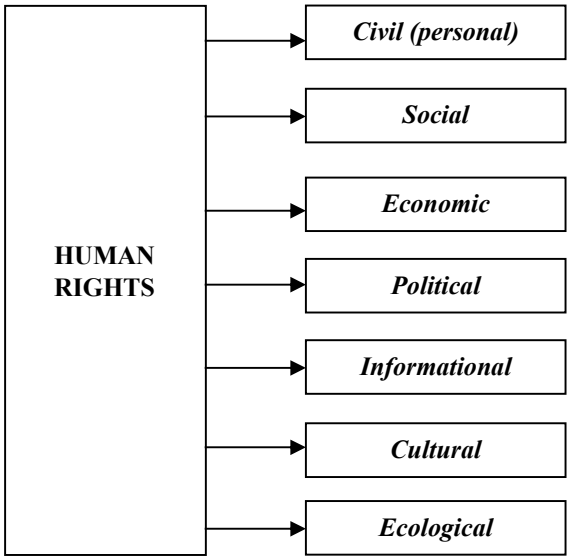


Fig. 2. Slide "Classification of human rights"

After that, students are given the following assignment: to characterize civil (economic, political, etc.) human rights and follow the scheme of their varieties. For example, Fig. 3 shows that the student includes the right to private property, the right to work, the right to use natural objects, the right to entrepreneurial activity to economic human rights.

It should be noted that the described above ways of combining words and visual aids have one thing in common: the analysis of visual objects is carried out by learners, and the teacher, using certain techniques, creates a situation of "discovering knowledge". Therefore, these two teaching methods are called "heuristic". Thus, these teaching methods provide productive learning activities of students, if they have certain intellectual abilities (analysis, synthesis, comparison, classification, selection of the main, etc.). It is natural that in the development of legal competence of pedagogical staff of economic colleges, these ways of combining words and teaching aids occupy a proper place in the subsystem of teaching methods.

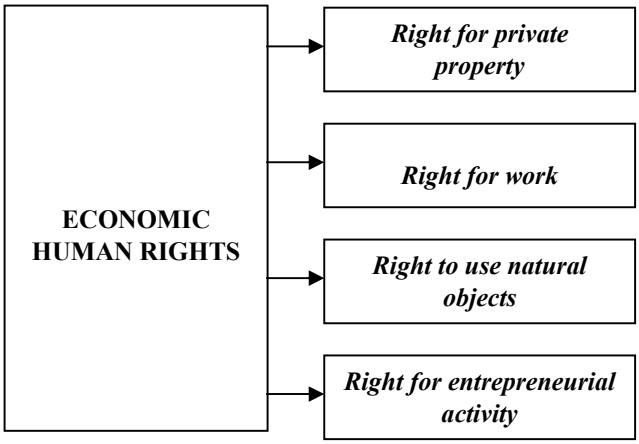
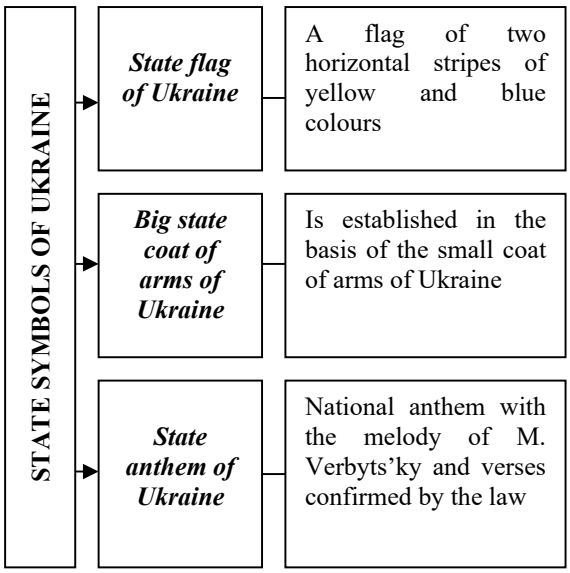


Fig. 3. Scheme of types of economic human rights as a result of solving the heuristic-explanatory problem by the student

In the other case, illustrative-anticipatory and illustrative-explanatory methods are used. An *illustrative-anticipatory* way of combining words and teaching aids is demonstrating an educational object, in which the teacher verbally precedes each fragment of the image display: first explains a certain part of the educational material, and only then demonstrates the visual aid. In the *illustrative-explanatory* way, on the contrary, the teacher explains the content of the educational material after each stage of demonstration. In this case, "…the teacher first demonstrates the educational object (or its component), commenting on the actions or their sequence, then analyzes in detail the visual information, draws conclusions. This method of combining words and visual aids can be used during a static demonstration, in which the multi-component static image… is explained by the lecturer step by step" [7, p. 127]. Examples of visual aids in the application of these methods in the study of state symbols of Ukraine are given in Fig. 4.

We should emphasize that modern digital technologies allow to modernize the characterized methods of combining words and visual aids, to synthesize individual methods of showing educational objects and, in general, to increase the efficiency of mastering educational material. In particular, when the teacher independently masters legal information, digital technologies allow not only to quickly find the necessary materials, but also to use presentations, videos, tests, simulated legal situations, etc.



a)

b)

c)

Fig. 4. Examples of combining visual aids and words in the study of state symbols of Ukraine: a) in the application of illustrative and anticipatory method; b), c) – when applying an illustrative-explanatory method

The rapid filling of the educational space with innovative digital technologies significantly changes the forms of the professional development of teachers. In order to confirm this position, we consider it expedient to cite a fragment of the Regulations on professional development and internships of the pedagogical and scientific staff of Kharkiv College of Trade and Economics of National trade and economic university [8]: "*Professional development of pedagogical and scientific staff of the College involves a continuous process of acquiring new and improving previously acquired professional and general competencies necessary for the professional activities, continuing self-education and other types and forms of the professional growth, and can be carried out through formal and non-formal education, internships professional activity, etc.… The main directions of the professional development of pedagogical and scientific staff of the College are as follows: development of the professional competencies (professional methods, educational technologies, etc.); psychological and physiological features of students of a certain age; basics of andragogy; creating safe and inclusive environment; features (specifics) of inclusive education, providing additional support in the educational process of children with special educational needs; use of information and communication and digital technologies in the educational process, including e-learning, information and cyber security; speech, digital, communication, inclusive, emotional and ethical competence; formation of professional competencies in the field: mastering the latest production technologies, acquaintance with modern equipment, facilities, machinery, condition and trends in the economy, enterprises, organizations and institutions".*

It is obvious that in this College of Economics the forms and directions of the professional development of teachers reflect the widespread introduction of digital technologies in the educational process, and, in fact, most of them can not be done without presentations, videos, etc. Analysis of the professional and legal development of teachers shows that interactive forms of Internet self-education are replacing the traditional forms of the professional development. Currently known are group forms of independent education work (round tables, business games, professional trainings, workshops, competitions of pedagogical creativity, virtual pedagogical councils, webinars, problem seminars, presentations of novelties), and individual ones like online tests, online conferences, various courses, etc. Digital technologies make up the bases of the new systems of knowledge acquisition like e-learning, network learning, autonomous learning, mobile learning, blended learning, etc.

New digital technologies have rapidly modernized a significant component (subsystem of the educational process) – educational aids among which now electronic educational resources dominate (*EER are educational digital tools of any type or the ones placed in the information and telecommunication systems that are reproduced by electronic technology and used in the educational process*). According to the Regulation on electronic educational resources (as amended by the order of the Ministry of Education and Science of Ukraine dated of May 29, 2019 No. 769) [9], EER include electronic educational publications (electronic version (copy, analogue) of a printed textbook, electronic textbook, e-workshop, e-textbook, e-course of lectures, e-textbook, etc.); electronic reference publications (electronic directory, electronic encyclopedia, electronic dictionary, etc.); electronic practical publications (collection of virtual laboratory works, electronic guidelines, etc.).

The importance of developing scientific and methodical support for applying digital technologies in modern educational practice was emphasized in the report of V. Kremen' at the general meeting of the National academy of pedagogical sciences on May 24, 2022: *"The key task of modernizing the education system is the formation of digital competence for lifelong learning of all the participants of the educational process. Given this, it is important to develop and implement information and digital learning*

resources and environments, digital educational technologies, to develop distance and blended learning. Thorough scientific and methodical support for the use of digital technologies in education and psychological and pedagogical support for their use, saturation of the open digital information and educational space of Ukraine with electronic educational resources and tools, overcoming "digital" inequality are of great importance" [10]. This indicates certain semantic and functional changes in the pedagogical activities, including professional and legal activities of teachers of economic colleges. We consider it expedient to point out that in O. Radkevych's study [11] the information-legal, legal-educational, communicative-legal, technological-legal, organizational-legal, intellectual-legal and value-normative functions of professional-legal activity of the pedagogical staff of vocational education institutions are quite thoroughly characterized. It should be noticed that the information and communication component is present in almost every of these functions, and therefore, the content of the development of legal competence of college teachers is significantly modernized due to digital technologies.

Thus, the goals and objectives of the development of legal competence of teachers of the College of economics, and, accordingly, the content, methods, forms and means of developing teachers' professional skills and legal awareness of students changed significantly (and, in our opinion, are constantly improving, modernizing) due to the introduction of new digital technologies in the pedagogical practice. This fact prompts to introduce the digital technology component into the structure of the proposed methodical system as without it none of the above components can function (Fig. 5).

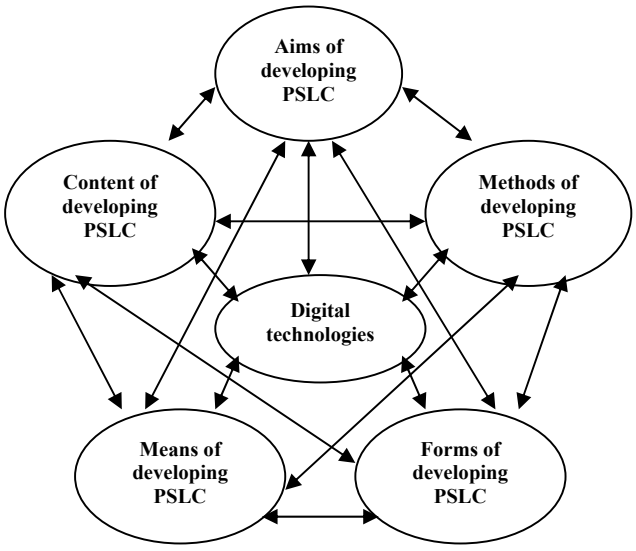


Fig. 5. Structure of the methodical system of developing pedagogical staff legal competence (PSLC) of economic colleges

3. Conclusion.

As it can be seen from Fig. 5, the hierarchy of components of the studied methodical system is dominated by the goals of legal competence of teachers, which in the system of strategic, tactical and operational tasks are subject to the general goal of ensuring positive changes in the levels of legal competence of teachers of economic colleges for purposeful formation of legal awareness, law-abiding students, readiness of future professional junior bachelors to implement legal aspects in the economic activity. In the "centre" of the structural construction, there is the component "digital technologies", which is connected to the other subsystems by means of two-way communication, which, in turn, are also interconnected. This construction of the methodical system meets the basic requirement: any change in one of the components of the system is inevitably reflected in the others.

The proposed methodical system is a part of the methodical system of the professional development of teachers, which, in turn, is a part of a mega-system of the pedagogical system of training specialists in the College of economics. These systems and the relationship between them as sets are shown using Euler circles in Fig. 6.

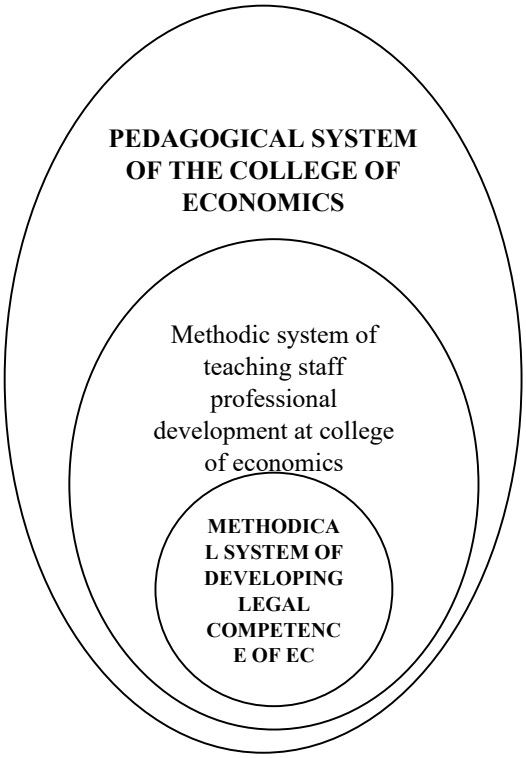


Fig. 6. Visualization of relations between systems by means of Euler circles

Prospects for the further research are associated with the justification of a set of goals and projecting the content of the development of legal competence of teachers of economic colleges.

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Roman Kurok graduated from Kyiv National University of Trade and Economics in 2007. Candidate of Juridical Sciences, ibtained PhD from National Academy of Security Service of Ukraine in 2014. Spheres of scientific interests: legal competence of teachers; innovative technologies in adult education, digital technologies in professional training.

Anatoliy Hritchenko graduated from Tychyna Uman State Pedagogical Institute in 1987, in specialty General technical disciplines with additional specialty 'Physics'. Obtained the degree of Doctor of Pedagogical Sciences at the Institute of Higher Education of the Academy of Pedagogical Sciences of Ukraine in 2010 in specialty "Theory and Methods of Vocational Education". Spheres of scientific interests: innovative technologies in the field of vocational training, information and communication technologies in the educational process, systems analysis, mathematical and statistical methods in pedagogical measurements, etc.

Borys Shevel graduated from Hlukhiv State Pedagogical University in 2006 in specialty Pedagogy and methods of secondary education. Labour training. Obtained the degree of Candidate of Pedagogical Sciences in specialty Theory and Methods of Vocational Education in 2011 at the National University of Life and Environmental Sciences of Ukraine. Dissertation topic is "Forming professional competencies of future engineers-teachers by means of information and communication technologies". Spheres of scientific interests: informatization of education, economic training of future pedagogical specialists.

Stanislav Marchenko graduated from Hlukhiv State Pedagogical University in 2007 in specialty Pedagogy and methods of secondary education. Labour training. Obtained the degree of Candidate of Pedagogical Sciences in specialty Theory and methods of teaching (technical disciplines) in 2014 at the Drahomanov National Pedagogical University. Dissertation theme is "Methods of teaching future teachers of computer modelling and design technologies". Spheres of scientific interests: use of computer-aided design systems in teacher training.

Oleksandr Deshchenko graduated from Hlukhiv State Pedagogical University in 1996 in specialty Labour training and professional orientation. Obtained the degree of Candidate of Pedagogical Sciences in specialty Theory and methods of teaching technology in 2013 at the Institute of Pedagogy of the National Academy of Pedagogical Sciences of Ukraine. The thesis theme is "Methods of training students of grades 8-9 to consciously choose a profession in the process of labour training". Spheres of scientific interests: the use of information and communication technologies in teacher training, professional training of future teachers of labour education and technology in higher education.