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PECULIARITIES OF ORGANIZING VOCATIONAL TRAINING OF SKILLED WORKERS IN THE CONDITIONS OF BLENDED LEARNING

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Abstract

The study relevance of vocational training organization of skilled workers in the conditions of blended learning is determined by the need to quickly adapt the system of vocational (vocational and technical) education to changes in various spheres of public life, in particular, globalization, integration into the European space, digitalization, quarantine restrictions, military operations in Ukraine for the effective implementation of educational tasks.

Goal: to analyse the state and peculiarities of the organization of vocational training of skilled workers in the conditions of blended learning.

Methods: analysis of philosophical, general scientific, methodical, psychological and pedagogical literature and generalization of its results – to identify the state of development of the problem; survey – to study the state of organization of vocational training in blended learning; comparison – to compare empirical data.

Results: the article analyzes the state and peculiarities of vocational training organization of skilled workers in the conditions of blended learning.

Conclusions: it is found that there is a need for state regulation and definition of the blended learning status, unification and efforts coordination of teachers, methodologists, scientists in the field of digitalization of education, creation and use of digital educational tools, digital competence development of teachers and students, dissemination of positive domestic and international pedagogical experience in the use of digital technologies through open specialized electronic platforms. Pedagogical staff are sufficiently motivated to master digital educational tools and technologies for organizing blended learning, are aware of the need to improve the level of digital culture. The most popular forms of professional development in this area are interactive forms that involve subject-subject interaction and partnership. There is a need to update the educational standard, vocational teacher training programs, and the content of teacher training programs; create an appropriate information and educational environment; and promote the practice of holding master classes, trainings, and webinars on the use of digital technologies to improve the digital competence of teachers.

Keywords: *blended learning, online learning, distance learning, digital competence, digitalization of education*

Introduction. In order to effectively implement modern tasks, Ukraine's educational system must quickly and flexibly adapt to changes in various spheres of public life, including globalization, integration into the European space, digitalization, etc. As a form that can meet the subjects` needs of the educational process, blended learning is proposed as a hybrid methodics that combines online learning, traditional and independent learning. It integrates digital technologies into the educational process along with traditional pedagogical practice, provides for the creation and functioning of an educational environment in which the educational process is not limited to direct contacts of its participants, but takes place both in person and remotely. This is not just a combination of direct (on-site) and indirect (through online learning opportunities) forms of interaction between students and teachers,

but a process of optimizing the educational process so that it becomes more effective for a generation that cannot imagine its life without digital technologies, and meets the needs of students in terms of varying the pace of learning, complexity and volume of material, format of interaction, etc.

Sources. The attention of scientists and educators to blended learning in VET increased in 2020 due to anti-epidemic quarantine measures, but in world educational practice, the introduction of blended learning began in the late twentieth century. At the beginning of the twenty-first century, pedagogical theorists and practitioners began a discussion on the specifics of this concept (Blended Learning, 2013; Oliver & Trigwell, 2005). Blended learning refers to the combination of traditional forms of education with innovative ones, including online and distance learning; a combination of different learning formats within one classroom, which ensures personalization of learning by giving students the right to choose the conditions and control over the process of mastering the necessary competencies (Blended Learning, 2022). Scholars also offer the following interpretation: "Blended learning is a combination of technology and traditional classroom learning based on a flexible approach that takes advantage of online training and monitoring tasks, which can significantly improve the quality of education" (Tomlinson & Whittaker, 2013). It is noted that online learning involves a purposeful, specially organized process of interaction between students and teachers, with digital technologies and with each other. It is uncritical in space, time, and a particular educational institution and takes place in a specific pedagogical system, the elements of which are the goal, content, means, methods and forms, teacher and student. In blended learning, the cognitive activity part of students takes place in the classroom under the direct supervision of the teacher, and the other part is in independent work with electronic resources individually or in groups (Kuzmenko, 2017).

A study of the scientific and pedagogical literature shows that most scholars agree that blended learning should be understood as a combination of the traditional academic environment and the use of distance learning opportunities (Akhmetov, Shaverskyi, 2007; Zhukovskyi, Haletskyi, 2018; Charity Eyre, 2013). In an open learning environment, participants of the educational process can obtain the necessary knowledge themselves using a variety of information resources (databases and knowledge, multimedia, educational systems, video and audio recordings, electronic libraries, etc. (Bykov, 2008).

Blended learning has been actively introduced in higher education institutions, so nowadays the vast majority of research and other publications on it relate to higher education. However, blended learning in the system of vocational education has its own specifics (Pasichnyk, Yelfimova, Chushak, Shynarovska & Donets, 2021).

Distance learning, which Ukraine urgently introduced in the spring of 2020 due to the pandemic, and blended learning, introduced in the country in response to military operations in 2022, served as an incentive for the accelerated implementation of this practice in VET institutions and its scientific justification. This experience has significantly influenced the level of digital literacy of all subjects of the educational process. Various aspects of the problem of high-quality organization of blended learning and ways to solve it, rethinking traditional models of education in VET institutions are being widely discussed.

The goal of the article is to analyse the state and peculiarities of vocational training organization of skilled workers in the conditions of blended learning.

Methods: analysis of philosophical, general scientific, methodical, psychological and pedagogical literature and generalization of its results – to identify the development state of the problem; survey – to study the state of organization of vocational training in blended learning; comparison – to compare empirical data.

Results and discussion. Within the framework of the statement stage of the methodical foundations study of future skilled workers vocational training in blended learning, the staff of the Laboratory of Distance Professional Training of the Institute of Vocational Education of the National Academy of Educational Sciences of Ukraine prepared a questionnaire and conducted a pedagogical staff survey of vocational (vocational-technical) education institutions to study the current state of the organization of blended learning. The questions of the questionnaire concerned the experience of vocational training in blended learning, digital tools for organizing online learning, assessment and control of learning outcomes in online learning, difficulties in implementing blended learning in VET institutions, technical support, psychological readiness of students, readiness of the educational institution for blended learning, forms and types of independent work in blended learning, the need to develop digital competence, current trends and forms of digital competence de-

velopment, methodical support for blended learning, ways to improve professional training in blended learning, etc. The surveys covered 2,935 vocational teachers of different types of vocational (vocational and technical education) institutions (mainly vocational lyceums, higher vocational schools, vocational education centres, including relocated ones) from 24 regions of Ukraine and the city of Kyiv.

More than 96.5% of respondents indicated that they had experience in providing vocational training in blended learning. In particular, 91.7% of teachers indicated that they switched to blended learning due to quarantine restrictions and military operations in Ukraine, and another 4.8% indicated that blended learning was provided for in training programs and plans. To organize online learning, the vast majority of teachers (84.4%) used Google Classroom, 9.5% used Moodle, and 7.4% used My Class. Video conferences were held using a combination of different digital tools: Google Meet (74.5%), Zoom (63.6%), Microsoft Teams (13.9%), Skype (9.6%). The most popular social networks and messengers for online learning were Viber (92.7%) and Telegram (55.1%). In addition, the following were used: Messenger (18.4%), Facebook (14.3%), and Instagram (13.1%). Only 55.6% of respondents answered affirmatively to the question about the availability of the Internet of sufficient quality to organize online learning, 41% do not always have it, and 3.5% do not have it. Computer equipment for online learning is provided to 62.9% of teachers, 27.7% are partially provided, and 9.4% of teachers are not provided. In most cases, a laptop (71.9%) and a smartphone (62.7%) are used. A desktop computer is used by 36.6% of respondents, and a tablet by 6.3%. Technical means of communication are mostly private property of teachers (in 54.2% of cases), partially owned by the educational institution and private property for 22.8% of teachers, and owned by the educational institution in 19.6% of cases.

Among the difficulties and problems of online learning, teachers pointed to poor quality of Internet and/or mobile connection (45.0%), insufficient development of students' ability to learn independently (41.5%), low motivation to learn by students (36.1%), lack or obsolescence of computer hardware and software by students (34.5%), lack of communication with students and colleagues (23.6%), difficulty in organizing task control and assessment (21.9%), rejection of online learning as
such by students (18.0%), insufficient level of digital competence of students (15.8%), lack of or outdated computer hardware and software for online learning by teachers (12.3%), lack of time to prepare classes (10.7%), lack of a standardized online platform for online learning (5.0%), insufficient level of their own digital competence (4.9%), insufficient level of their own methodological competence (1.5%). According to 39.8% of teachers, 50 to 75% of students are psychologically ready for online learning, 27.7% of teachers believe that 25 to 50% of students are ready, and 18.5% of teachers estimate this share to be more than 75%.

Regarding the readiness of the institution for blended learning, the highest scores were given to the readiness of teachers (3.8 points), lower scores were given to methodical support (3.7 points), and the lowest scores were given to technical support (3.2 points). The need to develop digital competence to implement blended learning is confirmed by 34.0% of teachers. The answer "rather yes" was chosen by 34.3% of respondents, "rather no" by 12.8%, 11.4% did not feel such a need, and 7.5% of teachers found it difficult to answer.

As forms of digital competence development, teachers indicated advanced training courses (60.3%), master classes (54.7%), video courses/lessons (54%), webinars (52.2%), trainings (35.2%), seminars (31.4%), and conferences (24.2%). At the same time, they consider master classes, video tutorials, and advanced training courses to be the most effective forms. In terms of digital competence development, electronic resources (the Internet) (92.8%), manuals/guidelines (51.2%), and textbooks (30.8%) were in demand. Monographs, abstracts in conference proceedings, and scientific articles in professional periodicals are of lesser interest.

Educators receive information about digital educational technologies and resources from social networks (62.2%), colleagues (57.1%), through participation in conferences, seminars, webinars, round tables (55.1%), through participation in trainings, courses, master classes (50.4%), specialized websites, and electronic libraries (29.9%). 43.2% of respondents indicated that they were not the authors of methodical support for blended learning. Presentation materials were prepared by 33.3% of educators, tasks for independent work – 31.4%, video materials - 19.6%, methodical recommendations – 10.6% of survey participants. 9.7% of teachers participated in the creation of a platform for distance learning, textbooks, and 7.9% developed e-learning courses.

36.1% of teachers expressed a desire to participate in a training/workshop on the development of e-learning support for blended learning, 45.4% had doubts about this, and 18.5% did not have such a desire. More than half of the respondents (56.5%)

indicated that their institution provides organized training in the development of e-learning support for blended learning. 45.0% of teachers have undergone special training organized by scientific, methodical institutions, higher education institutions on the organization of blended learning.

Teachers consider the following to be relevant ways/directions for improving vocational training in blended learning: ensuring sufficient Internet coverage/mobile Internet for educational institutions and the country (62.3%), providing teachers with the necessary equipment for organizing distance learning (45.5), updating the material and technical base of educational institutions (44.5%), ensuring equal access to resources (44.4%), providing the necessary equipment for training to students who need it (41.0%), development of a unified standard for online learning and relevant guidelines, materials (38.4%), teacher training in organizing online learning and using digital technologies (35.6%), teaching students to work independently and self-educate (32.5%), creation of a unified platform for learning in a group/institution/country with access to learning materials and assessment tools (30.5%), clear and coordinated organization of online learning in the educational institution (29.1%), use of new modern textbooks (26.0%), and establishment of communication between teachers, students, and parents (25.3%).of their professional activities in blended

19.7% of respondents are satisfied with the rsults learning, 59.8% are rather satisfied, 17.0% are rather dissatisfied, and 2.1% of teachers are dissatisfied.

Conclusions. The results of the survey showed the need for state regulation and determination of the status of blended learning, unification and coordination of teachers` efforts, methodists, and scientists in the field of digitalization of education, creation and use of digital educational tools, development of digital competence of teachers and students, dissemination of positive domestic and international pedagogical experience in the use of digital technologies through open specialized electronic platforms. Teachers are sufficiently motivated to master digital educational tools and technologies for organizing blended learning, are aware of the need to improve the level of digital culture. The most popular forms of professional development in this area are interactive forms that involve subject-subject interaction and partnership. There is a need to update the educational standard, vocational teacher training programs, and the content of teacher training programs; create an appropriate information and educational environment; and promote the practice of holding master classes, trainings, and webinars on the use of digital technologies to improve the digital competence of teachers.

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ОСОБЛИВОСТІ ОРГАНІЗАЦІЇ ПРОФЕСІЙНОЇ ПІДГОТОВКИ КВАЛІФІКОВАНИХ РОБІТНИКІВ В УМОВАХ ЗМІШАНОГО НАВЧАННЯ

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Реферат

Актуальність дослідження організації професійної підготовки кваліфікованих робітників в умовах змішаного навчання визначається необхідністю швидкої адаптації системи професійної (професійно-технічної) освіти до змін, що відбуваються в різних сферах суспільного життя, зокрема до глобалізації, інтеграції в європейський простір, цифровізації, карантинних обмежень, військових дій на території України.

Мета: здійснити аналіз стану та особливостей організації професійної підготовки кваліфікованих робітників в умовах змішаного навчання.

Методи: аналіз філософської, загальнонаукової, методичної, психолого-педагогічної літератури та узагальнення його результатів – для виявлення стану розробленості проблеми; опитування – для вивчення стану організації професійної підготовки в умовах змішаного навчання; порівняння – для порівняння емпіричних даних.

Результати: здійснено аналіз стану та особливостей організації професійної підготовки кваліфікованих робітників в умовах змішаного навчання.

Висновки. З'ясовано, що є потреба в державному унормуванні та визначенні статусу змішаного навчання, об'єднанні та координації зусиль викладачів, методистів, науковців у сфері цифровізації освіти щодо створення та використання цифрових освітніх інструментів, розвитку цифрової компетентності педагогів та здобувачів освіти, поширення позитивного вітчизняного та міжнародного педагогічного досвіду застосування цифрових технологій через відкриті спеціалізовані електронні платформи. Педагогічні працівники достатньою мірою вмотивовані до оволодіння цифровими освітніми інструментами та технологіями організації змішаного навчання, усвідомлюють необхідність та потребують підвищення рівня цифрової культури. Найбільш затребуваними формами професійного розвитку з цього напряму є інтерактивні форми, що передбачають суб'єкт-суб'єктну взаємодію та партнерство. Є необхідність в оновленні освітнього стандарту, освітніх програм підготовки педагога професійного навчання, змісту програм підвищення кваліфікації педагогічних працівників; створення відповідного інформаційно-освітнього середовища, поширення практики проведення майстер-класів, тренінгів, вебінарів з питань використання цифрових технологій для підвищення цифрової компетентності педагогічних працівників.

Ключові слова: *змішане навчання, онлайн-навчання, дистанційне навчання, цифрова компетентність, цифровізація освіти*

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