



SYNCHRONOUS-HYBRID EDUCATION AS AN INNOVATIVE MODEL FOR TRAINING ECONOMICS PROFESSIONALS

Kotko Yana 

PhD in Economics, Associate Professor,
Associate Professor of the Department of Economics and Business
State Biotechnological University, Ukraine

Kulinich Oksana 

PhD in Economics, Associate Professor,
Associate Professor of the Department of Economics and Business
State Biotechnological University, Ukraine

Summary. *The article looks at synchronous-hybrid education as an innovative model for organizing the educational process in training economic specialists in the context of digitalization. It defines the concept of «synchronous-hybrid education» and describes its principles, structural elements, and pedagogical foundations. The advantages of combining face-to-face and distance learning formats are analyzed, in particular flexibility, personalization of the educational process, interactivity, and increased accessibility of learning. The problems of implementing this model are highlighted-technical limitations, insufficient level of digital competence of teachers, psychological barriers of students, and risks of academic dishonesty. The feasibility of using synchronous-hybrid education in the training of economists, its role in the formation of professional, analytical, and digital competencies, as well as prospects for development, taking into account the integration of artificial intelligence, virtual, and augmented reality technologies, are substantiated. It is concluded that synchronous-hybrid education is an effective tool for modernizing economic education, which contributes to the development of competitive specialists capable of operating in the digital economy.*

Keywords: *synchronous-hybrid education, digitalization, economic specialists, digital competencies.*

Problem statement. The current stage of society's development is characterized by active digital transformation, which significantly changes approaches to organizing the educational process in higher education institutions. The need to modernize the educational environment is driven by the need to introduce innovative teaching technologies that ensure flexibility, interactivity, and accessibility of educational services for higher education seekers. In this context, it is particularly important to find effective models for organizing the educational process that can combine traditional and digital learning formats. The labor market now places increased demands on economic specialists, who must possess not only in-depth professional knowledge, but also developed digital, analytical, and communication skills. Therefore, economic education programs need to be adapted



to new socio-economic conditions and digitalization trends, which necessitates the search for modern approaches to training competitive specialists. In this context, synchronous-hybrid education emerges as an innovative model of organizing the educational process, combining the possibilities of face-to-face and distance learning, ensuring the simultaneous participation of students in real and virtual environments. This format contributes to improving the effectiveness of the educational process, expands access to educational resources, and creates conditions for the individualization of learning. Therefore, researching the features of implementing synchronous-hybrid education in the training of economic specialists is a relevant scientific and practical task of modern pedagogical science.

Analysis of research and publications. The issue of implementing innovative educational technologies, particularly hybrid and distance learning formats, attracts considerable attention from scholars in the fields of pedagogy, psychology, and economic education. In scientific literature, hybrid learning is seen as an effective tool for modernizing the educational process, ensuring the integration of traditional and digital forms of interaction between teachers and students. Researchers note that the combination of face-to-face and online learning components contributes to increasing the motivation of students, the flexibility of the educational environment, and the development of students' independence and digital competence.

The works of Lymarenko V. [1] reveal the essence of hybrid and blended learning, determine their impact on the effectiveness of the educational process and improve the quality of communication between learning participants. Some studies by Topolnik Ya. [2] emphasize synchronous interaction as a key factor in the success of hybrid formats, as it provides a sense of community, emotional connection, and reduces the effect of alienation in online education. Scientists Spirin O. [3], Oleksiuk V., and Sirenko O. are researching the problems of digitization of education, the creation of an open educational environment, and the development of distance learning formats in higher education institutions. Their work emphasizes the need to develop the digital competence of teachers, develop methodological recommendations for combining traditional and digital learning technologies, and ensure academic integrity in a blended learning environment.

In the context of training economic specialists, researchers Vasilenko Y. and Maryanko Y.G. [4] focus on the use of digital simulations, business cases, interactive economic models, and virtual training, which contribute to the development of analytical thinking, decision-making skills, and professional mobility of students. Research shows that the effectiveness of professional training for economists largely depends on the ability of the educational process to integrate digital technologies that stimulate active learning and practical orientation.

At the same time, scientific literature notes the insufficient development of the issue of synchronous hybrid education as a separate format, which involves the simultaneous participation of students in real (classroom) and virtual (online) environments. Most studies focus on aspects of asynchronous interaction or traditional blended learning, which does not take into account the specifics of simultaneous communication between students of different participation formats. Thus, the current state of scientific research indicates the existence of significant theoretical and practical potential for the development of hybrid learning, but the

issues of implementing a synchronous-hybrid model in the training of economic specialists remain insufficiently studied. This necessitates further scientific and methodological justification of the specifics of its implementation, identification of advantages, risks, and pedagogical conditions for effective functioning in the context of the digitalization of the educational environment.

Purpose of the study. The purpose of this study is to scientifically substantiate the effectiveness and potential of synchronous-hybrid education in training economists in the context of current trends in the digitization of the educational process. To achieve this goal, we analyze the current state of hybrid and distance education, identify their advantages, disadvantages, and opportunities for integration into the professional training system.

Particular attention is paid to revealing the essence of the concept of «synchronous-hybrid education» as an innovative format of educational interaction that combines the simultaneous participation of students in the classroom and online environments. The study analyzes the methods, technologies, and digital tools that ensure the effective implementation of such an educational approach. The final stage is an assessment of the effectiveness of the implementation of the synchronous-hybrid learning model in the training of future economists, in particular its impact on the quality of educational outcomes, the development of professional competencies, motivation to learn, and the level of digital readiness of students. Thus, the aim of the study is to provide a comprehensive theoretical and methodological justification of the possibilities and feasibility of using synchronous-hybrid education as an effective tool for modernizing the training of economists in higher education institutions.

Summary of the main material. In the current context of transformation of the educational space caused by globalization, digitalization, and the need to ensure continuity of learning, synchronous-hybrid education is becoming particularly relevant as one of the leading pedagogical innovations. This format combines the best features of traditional (classroom) and distance (online) learning, creating a flexible environment focused on the needs of students.

The concept of synchronous hybrid education is interpreted as an educational format in which the learning process is carried out simultaneously for two groups of students: those who are in the classroom and those who join remotely via digital platforms in real time. This approach ensures continuity of communication, equal access to educational resources, and creates conditions for integrated interaction between participants in the educational process, regardless of their location. The key principles of synchronous hybrid education are:

simultaneous offline and online participation of students, which ensures synchronous interaction between all participants in the educational process;

flexibility, which manifests itself in the ability to choose the format of participation in the class (classroom or remote attendance), adapt the pace of learning, and integrate various digital tools;

personalization of learning, which involves an individual approach to students, taking into account their educational needs, learning styles, and level of digital competence.

Thus, synchronous hybrid education is an effective pedagogical innovation that combines technological capabilities with pedagogical expediency, contributes to



improving the accessibility, quality, and flexibility of learning, and meets the requirements of modern knowledge society. For example, this model is actively used in universities, allowing students to independently choose the format of education in the US, is integrated into higher education programs to ensure the accessibility of education in remote regions (US, Canada), and a strategic direction for improving the digital infrastructure of universities and developing an inclusive educational environment is being actively implemented in the EU.

The organization of synchronous hybrid learning is based on a set of scientific and pedagogical approaches that ensure effective interaction between teachers and students in a combined physical and virtual educational space. Among them, the leading role is played by competency-based, orientation-based, and digital-humanistic approaches, which reflect current trends in the development of pedagogical science and digital education (Fig. 1).

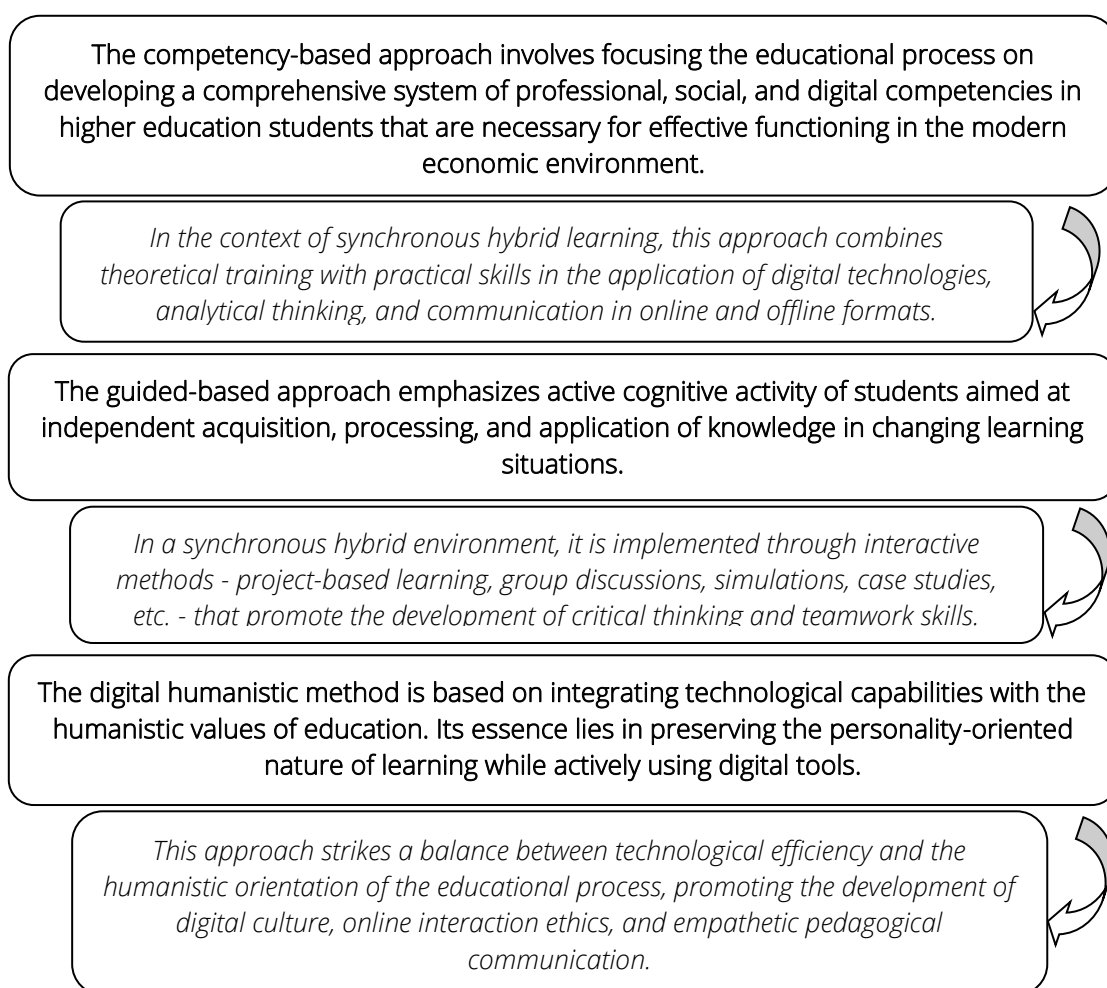


Fig. 1. Leading approaches to the development of synchronous-hybrid education in the context of digitalization

Source: developed by the authors

The theoretical foundations of interactive interaction and communication in a synchronous hybrid environment are based on the concepts of social constructivism, communicative action theory, and pedagogical partnership. They determine that effective learning in this format is only possible with two-way active



communication, joint knowledge construction, and the creation of an interactive space for collaboration. Thus, synchronous hybrid learning emerges as a comprehensive system that combines innovative technologies with scientifically based approaches to the formation of professional competence and the development of students' activity potential.

The training of specialists in economics has a distinct practical focus, as it is geared towards developing skills in management decision-making, financial analysis, forecasting, and planning. The educational process in this field involves the development of analytical, critical, and systematic thinking, which enables future specialists to assess economic phenomena comprehensively, find optimal solutions to problems, and adapt to changing market conditions. Accordingly, the synchronous-hybrid model combines classroom sessions with online components, ensuring flexibility and accessibility of education. In the process of training economists, digital simulations, business games, and virtual cases are actively used to model real economic situations and promote the development of professional competencies. The use of interactive panels and feedback systems increases student engagement and ensures timely monitoring of academic performance, which overall improves the level of professional training, independence, and motivation of students, as well as the quality of the educational process as a whole [1-2].

The development of synchronous hybrid education, which combines simultaneous learning in the classroom and online, is accompanied by a number of problems that affect the effectiveness of the educational process and the quality of knowledge acquisition (Fig. 2). One of the key problems is technical limitations and insufficient digital literacy among teachers. Ensuring a stable internet connection and the availability of modern equipment and software are necessary conditions for effective interaction in a hybrid format. However, in many educational institutions, the technical base remains underdeveloped, which complicates the implementation of the educational process. In addition, not all teachers have the necessary digital skills, which reduces the quality of communication, interactivity, and control of students' learning activities [3].

An important factor affecting the effectiveness of hybrid learning is the psychological barriers of students. Some students find it difficult to adapt to new learning formats, experience a decline in motivation due to the lack of direct contact with teachers or classmates, and have difficulty organizing independent work in an online environment. These aspects require the development of psychological support for students and the formation of self-regulation skills in learning activities [4-5]. The issue of ensuring academic integrity in a synchronous-hybrid format deserves special attention. In conditions of remote student participation, monitoring the completion of assignments becomes more difficult, which creates risks of academic misconduct, including cheating, the use of outside sources, or dishonest test-taking.

Therefore, overcoming these problems requires a comprehensive approach that combines technical modernization of the educational process, improving the digital competence of teaching staff, psychological support for students, and strengthening the culture of academic integrity. This will ensure the effective functioning of synchronous-hybrid education as a modern model of professional training [5].

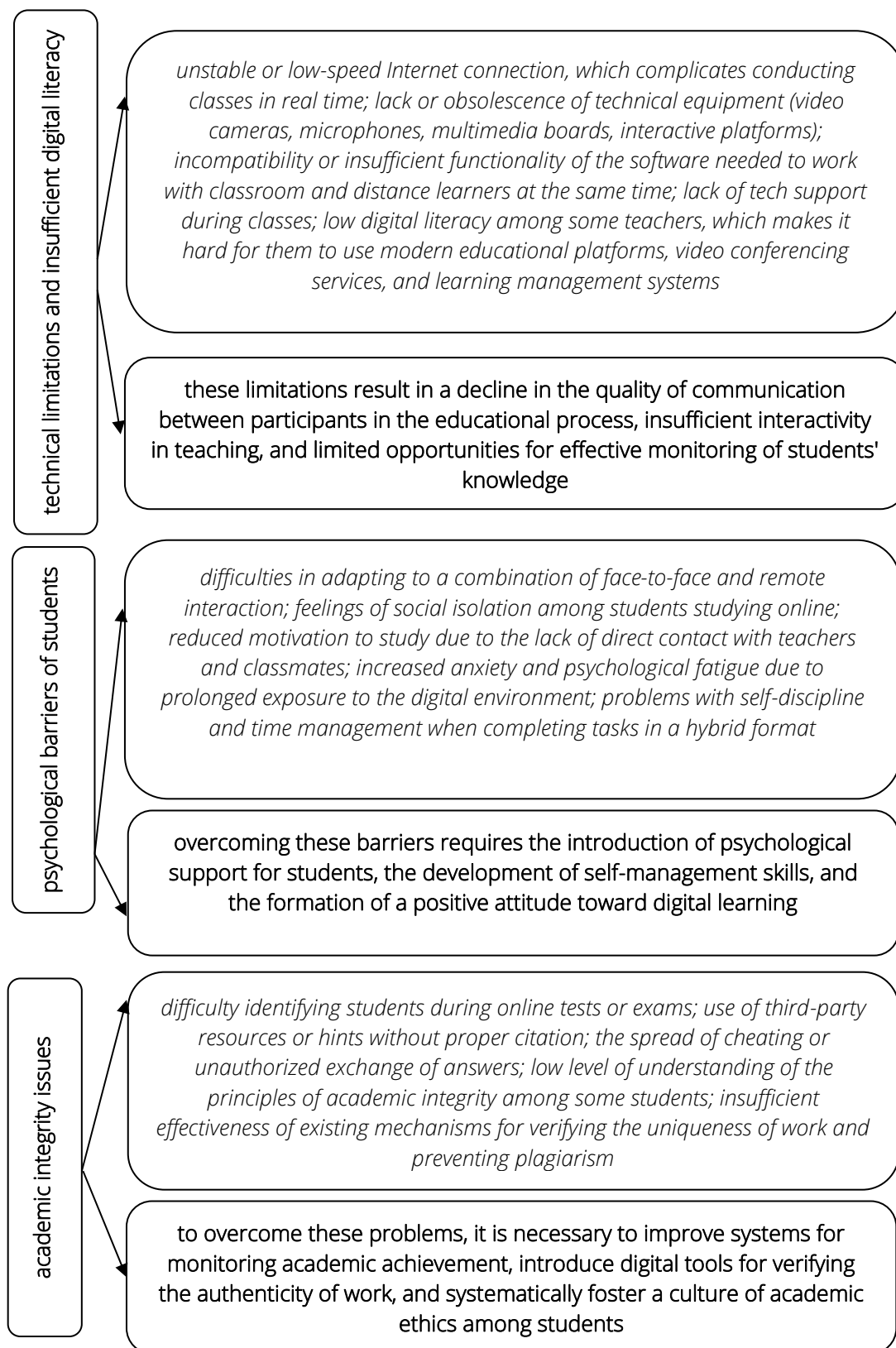


Fig. 2. Systematization of problems in the implementation of synchronous-hybrid learning

Source: developed by the authors

For more effective synchronous-hybrid learning, an innovative model is being created that ensures the harmonious integration of synchronous and asynchronous



forms of educational activity, active interaction between teachers and students, the development of professional competencies of economists, as well as comprehensive assessment of learning outcomes based on systemic criteria of success, engagement, and satisfaction with the educational process. The effective implementation of synchronous-hybrid learning requires the development of clear methodological guidelines for teachers, in particular:

- creating interactive content - teachers need to adapt teaching materials to the digital environment using interactive presentations, video lectures, integrated economic models, tests, and market situation simulators. It is advisable to use multimedia resources that stimulate student engagement, as well as gamification elements to maintain interest in learning;

- balance between synchronous and asynchronous activities - to achieve optimal results, it is important to ensure a harmonious combination of synchronous classes (online discussions, seminars, consultations) with asynchronous forms (independent study of materials, completion of assignments, participation in forums); this balance allows for individual learning speeds and increases the flexibility of the educational process;

- psychological and pedagogical aspects of student interaction in different formats - it is important to create equal opportunities for participants who study in the classroom and remotely; the teacher should pay attention to the socialization of students, the formation of a positive psychological climate, and the reduction of stress associated with digital learning.

Thus, this model serves as a methodological basis for organizing synchronous hybrid learning, contributes to improving the effectiveness of the educational process, provides equal opportunities for students in offline and online formats, and allows for systematic assessment of learning outcomes and the development of key competencies of economists [6-7].

The synchronous-hybrid learning format continues to develop dynamically, opening up new opportunities for training future economists in the digital age. One of the key prospects is the digitization of economic education using artificial intelligence (AI) technologies.

The use of AI allows for the personalization of the learning process, the adaptation of educational resources to the individual needs of students, the automation of assessment and performance analysis, and the improvement of the quality of academic counseling. Moreover, the integration of virtual and augmented reality technologies into synchronous-hybrid classes opens up new horizons for the practical training of economists.

The use of VR/AR enables the modeling of economic processes, the simulation of market situations, and the visualization of complex financial and management models, which contributes to a deeper understanding of theoretical material and the development of analytical skills. Another important prospect is the formation of a system of continuous learning, which involves the constant updating of knowledge and competencies throughout one's professional career. The synchronous-hybrid format promotes the development of students' independence and digital literacy, which is a prerequisite for adapting to rapid changes in the economic environment and ensures the competitiveness of graduates in the labor market. Thus, the

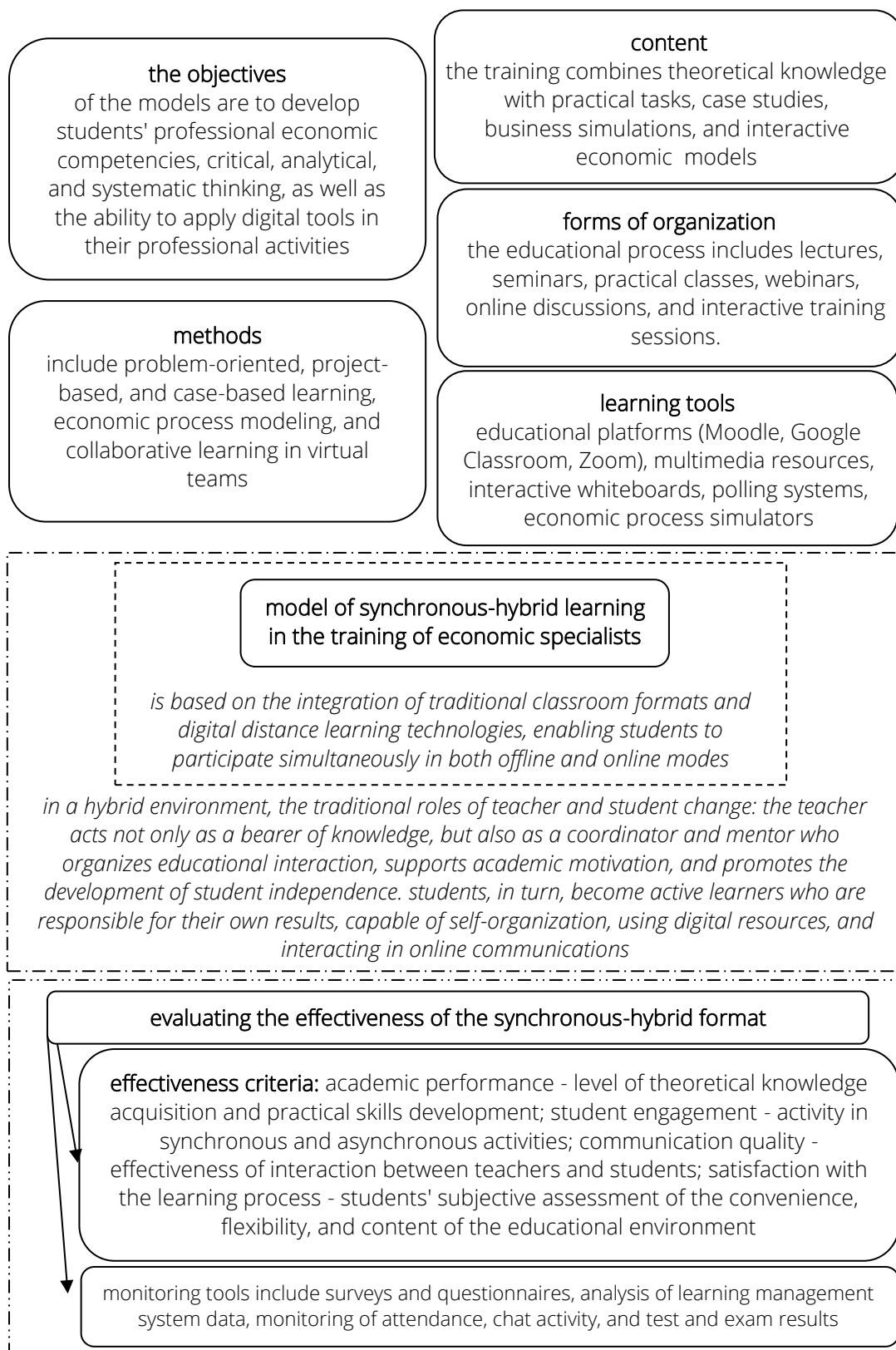


Fig. 3. Structural-logical model of implementing synchronous-hybrid learning in the training of future economists

Source: developed by the authors

development of synchronous-hybrid education in the economic sphere is a promising direction for the modernization of the educational process, combining

innovative technologies, flexible forms of learning, and the concept of continuous professional development [8].

Conclusions and recommendations. The synchronous-hybrid model ensures equal access to educational resources for students regardless of their location and creates conditions for the development of independence, critical thinking, and digital competence, which are key characteristics of a modern economist. Its implementation is based on a combination of competency-based, orientation-based, and digital-humanistic approaches that ensure the integration of technological capabilities with the humanistic values of education. This contributes to the formation of not only professional but also social, communicative, and ethical competencies of students. At the same time, the effectiveness of synchronous-hybrid education directly depends on the level of digital infrastructure of the educational institution, the technical readiness of teachers and students, as well as the availability of methodological recommendations for organizing the educational process in a combined environment. It has been found that the main barriers to the implementation of the model are technical limitations, insufficient digital literacy of teaching staff, psychological fatigue, and risks of academic dishonesty. Overcoming these barriers requires a comprehensive approach that includes modernizing the educational and technical base, improving teacher training programs, providing psychological support to students, and developing an effective system for ensuring academic integrity.

From a scientific and methodological point of view, synchronous-hybrid education is an effective tool for modernizing economic education, providing practice-oriented training for specialists through the integration of digital technologies, simulations, business cases, and economic process modeling. The introduction of this model helps future economists develop strategic thinking, analysis, and forecasting skills, which determines their competitiveness in the global labor market.

References:

- [1] Lymarenko V. (2024). Rozvytok tsyfrovoy kompetentnosti vykladachiv zakladiv vyshchoi osvity: perspektyvy ta vyklyky. Pedahohichna osvita: teoriia i praktyka, № 36. pedosv.kpnu.edu.ua/article/view/322490
- [2] Topolnyk Ya. (2025). Vykorystannia tsyfrovoykh osvitnikh seredovysch u profesiinii pidhotovtsi maibutnikh vykladachiv zakladiv vyshchoi osvity. Humanitarnyi visnyk pedahohichnoho universytetu, № 3. gnvp.ddpu.edu.ua/article/view/339908
- [3] Spirin O. (2024). Model rozvytku tsyfrovoy kompetentnosti naukoykh ta naukovopedahohichnykh pratsivnykiv. Osvitni innovatsii v tsyfrovomu seredovyschi, № 2.
- [4] Marianko Ya.H., Ohrenich M.A. (2023). Osoblyvosti dystantsiinoi osvity v umovakh viiny. Naukovi zapysky. Seriya: pedahohichni nauky. Vyp. 208. S. 171 – 176.
- [5] Androsova, T.V., Kulinich, O.A. (2024). Rol samoosvity v praktychnii pidhotovtsi fakhivtsiv ekonomichnoi sfery. URL: <https://repo.btu.kharkiv.ua/server/api/core/bitstreams/e9c10721-132a-4fd6-b81f-33e477a1e99e/content>
- [6] Kotko, Ya., Bugrymenko, R., Kulinich, O., Androsova, T. (2024). Applied aspects of training specialists in the economic field in modern conditions. Hraal nauky. № 45. S.73-82 URL: <https://doi.org/10.36074/grail-of-science.01.11.2024.007>



- [7] Kotko, Ya., Bugrymenko, R., Kulinich, O. (2024). Traditional and innovative approaches to the practical training of specialists in economic specialties. Hraal nauky. 2024. № 46. S.144-152 DOI: <https://doi.org/10.36074/grail-of-science.29.11.2024.014>.
- [8] Kotko Ya., Kulinich O. (2024). The modern interrelation of formal, non-formal and informal education in the world. Hraal nauky. № 47. R. 67-78. 10.36074/grail-of-science.20.12.2024.005

СИНХРОННО-ГІБРИДНА ОСВІТА ЯК ІННОВАЦІЙНА МОДЕЛЬ ПІДГОТОВКИ ФАХІВЦІВ ЕКОНОМІЧНОГО ПРОФІЛЮ

Котко Яна Миколаївна

кандидат економічних наук, доцент,
доцент кафедри економіки та бізнесу
Державний біотехнологічний університет, Україна

Кулініч Оксана Андріївна

кандидат економічних наук, доцент,
доцент кафедри економіки та бізнесу
Державний біотехнологічний університет, Україна

Анотація. У статті розглянуто синхронно-гібридну освіту як інноваційну модель організації навчального процесу у підготовці фахівців економічного профілю в умовах цифровізації. Визначено сутність поняття «синхронно-гібридна освіта», охарактеризовано її принципи, структурні елементи та педагогічні засади. Проаналізовано переваги поєднання очного та дистанційного форматів навчання, зокрема гнучкість, персоналізацію освітнього процесу, інтерактивність і підвищення доступності навчання. Висвітлено проблеми впровадження цієї моделі – технічні обмеження, недостатній рівень цифрової компетентності викладачів, психологічні бар'єри студентів та ризики академічної недоброчесності. Обґрунтовано доцільність використання синхронно-гібридної освіти у підготовці економістів, її роль у формуванні професійних, аналітичних і цифрових компетентностей, а також перспективи розвитку з урахуванням інтеграції технологій штучного інтелекту, віртуальної та доповненої реальності. Зроблено висновок, що синхронно-гібридна освіта є ефективним інструментом модернізації економічної освіти, який сприяє розвитку конкурентоспроможних фахівців, здатних діяти в умовах цифрової економіки.

Ключові слова: синхронно-гібридна освіта, цифровізація, фахівці економічного профілю, цифрові компетентності.