

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ БІОРЕСУРСІВ
І ПРИРОДОКОРИСТУВАННЯ УКРАЇНИ



Матеріали Міжнародної науково-практичної конференції

**ПРОДОВОЛЬЧА ТА ЕКОЛОГІЧНА БЕЗПЕКА
В УМОВАХ ВІЙНИ ТА ПОВОЄННОЇ ВІДБУДОВИ:
ВИКЛИКИ ДЛЯ УКРАЇНИ ТА СВІТУ**

*присвяченої 125-річчю Національного університету
біоресурсів і природокористування України*

**Секція 4. Якість освіти та гуманітарна наука в умовах війни
та глобальних викликів**

**25 травня 2023 року
Київ, Україна**

Організатор конференції:

Національний університет біоресурсів і
природокористування України

Продовольча та екологічна безпека в умовах війни та повоєнної відбудови: виклики для України та світу: мат. Міжн. наук.-практ. конф., секція 4: Якість освіти та гуманітарна наука в умовах війни та глобальних викликів (м. Київ, 25 трав. 2023 р.). Київ, 2023. С. 358.

Матеріали конференції подано в авторській редакції.

У збірнику подано результати обговорення актуальних проблем, перспектив і шляхів забезпечення продовольчої та екологічної безпеки в умовах війни, плану відновлення України, сталого розвитку світу в контексті глобальних і регіональних викликів, трансформації суспільства та формування нової парадигми розвитку.

Редакційна колегія:

Ніколаєнко С. М. (відповідальний редактор), Кваша С. М., Кондратюк В. М., Ткачук В. А., Шинкарук В. Д., Барановська О. Д., Баль-Прилипка Л. В., Братішко В. В., Глазунова О. Г., Гриценко І. С., Діброва А. Д., Євсюков Т. О., Каплун В. В., Коломієць Ю. В., Кононенко Р. В., Васишин Р. Д., Мельник В. І., Остапчук А. Д., Отченашко В. В., Рудик Я. М., Ружило З. В., Савицька І. М., Тонха О. Л., Цвіліховський М. І., Яра О. С.

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УДК 378.018-025.26

**HYBRID LEARNING AS A FORM OF IMPLEMENTATION IN THE EDUCATIONAL
PROCESS**

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Hybrid learning as an educational format, has become increasingly popular in recent years. According to a report by ResearchAndMarkets, the global hybrid learning market size is expected to grow from \$11.35 billion in 2020 to \$25.81 billion by 2026, at a compound annual growth rate of 14.8% during the forecast period. With the outbreak of COVID-19, hybrid learning has become even more prominent, serving as an effective solution to distance learning. This paper explores the latest research directions of education and implementation of hybrid learning, including personalized learning, data-driven teaching, instructional design and evaluation, social learning, and teacher training and development.

Personalized learning is one of the most significant advantages of hybrid learning. According to a survey by EdTech Magazine, 89% of students said they want to be able to move through coursework at their own pace, and 60% said they would like to see more technology used in the classroom. Blended learning can provide students with flexible and diverse learning experiences, as it combines online and offline learning activities. Teachers can use online tools to create personalized learning paths and content, providing students with the opportunity to learn at their own pace and level, enhancing student engagement and achievement. For example, a study by the Clayton Christensen Institute found that a personalized learning model using hybrid learning techniques in two school districts in California resulted in a 116% increase in the number of students scoring proficient or advanced in math, and a 130% increase in the number of students scoring proficient or advanced in English language arts.

Data-driven teaching involves using data to inform instructional decision-making, such as identifying student progress, predicting learning outcomes, and evaluating the effectiveness of teaching strategies. hybrid learning can provide teachers with a wealth of data and information about students' learning progress and behaviors. By analyzing this data, teachers can adjust their teaching strategies and provide targeted support to students, enhancing the efficiency and effectiveness of teaching and learning. For example, a study by the National Education Policy Center found that a hybrid learning program in a Colorado school district resulted in significant increases in student achievement in reading and math, as well as improvements in attendance and behavior. The program used a data-driven approach to identify struggling students and provide targeted interventions to support their learning.

Instructional design and evaluation are essential directions of hybrid learning. By evaluating students' learning outcomes and feedback, teachers can continuously improve and optimize teaching strategies and course design. Moreover, instructional design and evaluation can also consider students' diverse characteristics and needs, ensuring that hybrid learning is accessible and effective for all learners. For example, a study by the University of Central Florida found that a hybrid learning program in a physics course resulted in higher student performance and satisfaction compared to a traditional lecture-based course. The program used instructional design principles such as active learning and formative assessment to engage students and provide targeted feedback.

Hybrid learning can also facilitate social learning, which refers to learning that occurs through social interactions and collaborations. According to a report by eLearning Industry, 65% of students feel that social media helps them learn and 47% of educators use social media for professional development. Blended learning can provide platforms to facilitate social learning, such as online discussions, group projects, and peer reviews. Social learning can help students to develop communication and collaboration skills, build relationships, and enhance their learning outcomes. For example, a study by the University of Wisconsin found that a hybrid learning program in a sociology course resulted in higher levels of critical thinking and engagement among students, as well as improved student satisfaction with the course. The program used online discussion forums and collaborative group projects to facilitate social learning and peer-to-peer feedback.

Teacher training and development is a crucial component of successful hybrid learning implementation. According to a report by the National Education Association, 80% of teachers feel they need more professional development on using technology effectively in the classroom. hybrid learning requires teachers to have a range of skills and knowledge, including instructional design,

data analysis, and technology integration. Teacher training and development can provide teachers with the support and resources they need to effectively implement hybrid learning in their classrooms. For example, a study by the University of Michigan found that a hybrid learning program in a high school biology course resulted in higher levels of student achievement and engagement, as well as improved teacher confidence and satisfaction with the program. The program provided extensive training and support to teachers, including workshops, coaching, and ongoing professional development.

In conclusion, hybrid learning is a rapidly growing trend in education that has the potential to transform teaching and learning. Personalized learning, data-driven teaching, instructional design and evaluation, social learning, and teacher training and development are key research directions of hybrid learning that can enhance student engagement and achievement, improve teacher effectiveness, and provide a more accessible and equitable education for all learners. As hybrid learning continues to evolve and expand, it is important for educators to stay up-to-date with the latest research and best practices to ensure the success and effectiveness of this innovative educational format.