

## THE WONDER OF THE AGE: INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE ENGLISH CLASSROOM

### ДИВО ВІКУ: ІНФОРМАЦІЙНІ ТА КОМУНІКАТИВНІ ТЕХНОЛОГІЇ НА ЗАНЯТТІ З АНГЛІЙСЬКОЇ МОВИ

*The paper aims to consider traditional and innovative information communication technologies in the context of Tertiary education English classes, in the era of a change in the civilizational paradigm towards extremely rapid information and technological progress. Besides general analysis of modern computer technologies application, it is necessary to consider the role of Generative AI in the form of Large Language Models associated with digitalization, which aims to create a modernized educational environment for the most effective combination of the latest technologies and teaching methods. Using the comparative method, the method of descriptive analysis, as well as scientific sources related to the issue under consideration, we came to the conclusion that it is necessary to pay more attention to the key issues of innovative information technologies application, focusing on the modern Tertiary education paradigm of teaching in general and English classes in particular. The methodology used helps to identify the main changes that make it possible to revise the basic postulates in teaching and learning; to offer a different understanding of the categories of knowledge and teaching methods; to recommend strategies for characterizing media and technologies of the 21st century; to select the most important skills that help integrate information technologies into linguistic and educational content. It is also appropriate to focus on the study of key English language disciplines taught at universities and institutes, namely 'English for Specific Purposes', 'English for Academic Purposes', 'Business English', etc. Another very important issue is the attitude of teachers and students to the implementation of information and communication technologies in teaching and learning: it is necessary to clearly understand what benefits such strategies will bring to students and teachers in their professional/educational context. Theoretical trends such as constructivism and socio-cultural theory will also significantly help to identify and understand the issues mentioned above.*

**Key words:** educational information technologies, information and technological progress, computer technologies, Internet, generative artificial intelligence, knowledge and skills.

*Дана стаття має на меті розглянути традиційні та інноваційні інформаційні комунікативні технології у контексті ефективності їх застосування на заняттях з англійської*

*мови у вищій школі в епоху зміни цивілізаційної парадигми в сторону надзвичайно бурхливого інформаційно-технологічного прогресу. Разом із загальним аналізом застосування сучасних комп'ютерних технологій, потрібно розглянути переваги, недоліки та роль Генеративного ШІ у формі Великих Мовних Моделей, пов'язаних із диджиталізацією, що має на меті створення модернізованого освітнього середовища для максимального ефективного поєднання новітніх технологій та методів навчання. Застосовуючи компаративний метод і метод описативного аналізу, на основі відповідних наукових джерел, ми прийшли до висновку, що потрібно більше приділити увагу ключовим питанням використання інноваційних інформаційних технологій, визначити сучасну парадигму навчання загалом і англійської мови зокрема у вищій школі. Використана методологія допомагає визначити головні зміни, які дають можливість перегляду основних постулатів у викладанні і навчанні; пропонувати сучасне розуміння категорій знання і методів навчання; рекомендувати стратегії для характеристики медіа і технологій у умовах ХХІ століття; вибрати найважливіші навички, що допомагають інтегрувати інформаційні технології у лінгвістичний і навчальний контент. Доречно також зосередитись на дослідженні ключових дисциплін з англійської мови, які викладають в університетах та інститутах, а саме 'Англійська мова фахового спрямування', 'Англійська мова для академічних цілей', 'Ділова англійська мова', тощо. Також дуже важливим питанням є відношення викладачів і студентів до впровадження інформаційних та комунікативних технологій у викладання і навчання: потрібно чітко зрозуміти, яку користь принесуть такі стратегії студентам і викладачам у професійному і навчальному контексті. Такі теоретичні тренди як, наприклад, конструктивізм і соціально-культурна теорія так само суттєво допоможуть ідентифікувати і зрозуміти питання, зазначені вище.*

**Ключові слова:** навчальні інформаційні технології, інформаційно-технологічний прогрес, комп'ютерні технології, інтернет, генеративний штучний інтелект, знання і навички.

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**The problem being regarded:** The main elements of the problem being regarded are organised around the issue of educational informational technologies the analysis of which helps to understand in what way the new nature of the digitalised knowledge influences different approaches to English language learning and teaching, how to balance the subject

content with skills needed for the digital age, what courses will be the best – face-to-face, blended or fully online, what strategies and methods of teaching are most effective in a technology-oriented environment, especially being applied to such disciplines as English for Special Purposes (ESP), English for Academic Purposes (EAP) and Business English. It

is also critical to identify what are the real advantages for the students using Computer-Assisted Language Learning (CALL), Massive Open Online Courses (MOOCs), Open Educational Resource (OERS), Open Textbooks (OT) taking into consideration not only digital skills, but the knowledge paradigm that will properly accommodate the learners in a digital age.

**Research and publications review:** The British Council's New Directions series, held in Berlin in March 2025, has analysed the transformation of language learning and assessment with a focus on real-world communication in a digital age.

This conference has highlighted the future of language learning and assessment in a digital age, specifically focusing on the use of artificial intelligence (AI) and informational and communicative technology (ICT) for real-world communication gathering experts and practitioners from prominent institutions of the world. Additionally, the 11th edition of the ICT for Language Learning Conference, which has been held previously in Florence, Italy, was of high value too. This conference aimed to promote international cooperation and share best practices in the application of ICT in language learning and teaching.

Most of the books that have been published in recent time are general collections of research materials or resource books for teachers which cover the ideas about how teachers can leverage technology often based only on classroom experience, not incorporating it into the language teaching skills and methodology. Teachers then apply these theories into their classroom work, but they very seldom check the results of their experiments and investigations [4, 5, 12].

Many researchers in the field of ICT application into the teaching process consider the wider meaning of the language learning skills. They argue that the ICT skills should be incorporated into language learning methodology. New electronic literacies [14] include computer literacy, information literacy, multimedia literacy, and computer-mediated communication literacy. These literacies are important in many languages, but especially critical in English because 50 per cent of the world's online content was taking place in English. The majority of online information and communication in English creates the possibilities to redesign the English language curriculum to incorporate technology-oriented communication [14, 6].

**Issues requiring further consideration.** In the area of language education in the 21st century the role of a body of teachers with the knowledge, and skills is essential in terms of designing appropriate technology usage customized to the local environment. We could have very good, so to say, hardware, software, but very often lack of humanware. The aim of TESOL should carefully combine technological and language skills plus personal development of a person.

**The aim of the article.** The research is aimed at considering and analyzing the main issues and

challenges of the English language learning paradigm in the context of innovative approaches to the problem of ICT incorporation into the curricula and methodology of the higher school in the digital age.

**The main body.** In a digital age we are immersed in technology. In order to deeply understand what it is related to, let us give the definition of the term technology: technology refers to the application of scientific knowledge for practical purposes, often involving the creation and use of tools, machines, and systems to solve problems and improve human life. It encompasses a wide range of things, from simple tools like a hammer to complex systems like computers and the internet. Essentially, technology is the means by which humans apply knowledge to manipulate their environment and achieve specific goals. Education, although often slow in technology adoption, is nevertheless not an exception today. Learning has always been a ubiquitous human activity that can function quite well without any technological intervention [3]. So in an age immersed in technology, what is its role in education? What are the strengths and the weaknesses of technology in education? When should we use technology and for what purposes? To answer these questions let us come back to the history of technology in education that counts 2,500 years. The first signs of technologies' application were presented in oral communication through human speech making memorization the pivotal skill in ancient Greece; Slates were used in India in the 12<sup>th</sup> century while the chalkboard became popular in European countries in the 18<sup>th</sup> century. Overhead projectors became common for lecturing in the 1950s, 1960s that were later replaced by the electronic ones and PowerPoint in the 1990s. These strategies were not so much meant for education but mainly for military and business purposes. Written communication strategies have also a long history with a real boom in the 15<sup>th</sup> century when the printing press was invented. Elaboration of the postal system in the 1840s paved the road to the development of the first formal correspondence education. In the 1970s, the Open University designed printed course units that combined learning activities with the print medium. With the development of web-based learning systems in the mid-1990s, textual communication became the main communication source for Internet-based learning [3]. Educational broadcasting programs were initiated in schools by the BBC radio programs in the 1920s; television was first used in education in the 1960s for schools and for general education. In the 1970s the use of television for education rapidly spread around the world, being seen in such world agencies as the World Bank and UNESCO, and used for education in developing countries [8]. In the 1990s the language-capture systems technology became extremely popular allowing different students to view the lectures at any time and place with the Internet connection. In 1954 B. F. Skinner started experimenting with teaching machines

that made use of programmed learning, based on the theory of behaviorism. Skinner's teaching machines were one of the first forms of computer-based learning [13]. In the late 1970s, M. Turoff and R. Hiltz at the New Jersey Institute of Technology were carrying out experiments with blended learning, using NJIT's internal computer network. They combined classroom teaching with online events discussion, and titled this 'computer-mediated communication' or CMC course [7]. In modern teaching blended learning has shown the advantages of applying this technology compared to separately used face-to-face or fully online ones practicing the blended learning teaching based on pragmatic vision of its application. The World Wide Web which is an application running on the Internet was officially launched in 1991. By 2008, G. Siemens, S. Downes and D. Cormier in Canada were already applying web technology to create the first Massive Open Online Course (MOOC), that linked webinar presentations and/or blog posts [11]. Judging from the two main advantages of MOOCs, that is, being open and free we should say that today it is an incredibly valuable addition to informal education. Social media, often called a sub-category of computer technology, covers a big volume of different technologies, including blogs, wikis, YouTube videos, mobile devices such as phones and tablets, Twitter, Skype and Facebook. A. Kaplan and M. Haenlein characterize social media as "a group of Internet-based applications that...allow the creation and exchange of user-generated content, based on interactions among people in which they create, share or exchange information and ideas in virtual communities and networks" [9]. As we see, education was adopting different technologies over a long period of time. Many of them considering newly emerging technologies such as serious games and gamification, virtual and augmented reality, artificial intelligence, are not completely new technologies replacing the older ones. But what really distinguishes the digital age is the storming growth of ICT development. Thus, we can define the influence of the ICT on education as a paradigm shift in the context of educational technology [3].

Concerning our vision we can say that we are more inclined to think of using ICT in education as things or tools used to support teaching and learning that are often working as a technology system. However, technologies do not themselves communicate meaning. They should be commanded to do something until they are activated. Educational technologies are very much connected with the skills necessary specifically in the digital era. They include communication skills, the ability to work independently, ethics and responsibility, teamwork and flexibility, thinking skills (critical thinking, problem-solving, creativity, originality, strategizing, for example) and digital skills.

As stated in the paper 'Large language models and GenAI in education: Insights from Nigerian in-service teachers through a hybrid ANN-PLS-SEM approach'

by Musa Adekunle Ayanwale, Owolabi Paul Adelana, Nurudeen Babatunde Bamiro, Stella Oluwakemi Olatunbosun, Kabir Oluwatobi Idowu and Kayode A. Adewale, 'The rapid integration of Artificial Intelligence (AI) in education offers transformative opportunities to enhance teaching and learning. Among these innovations, Large Language Models (LLMs) like ChatGPT hold immense potential for instructional design, personalized learning, and administrative efficiency' [2]. AI-driven educational transformation highly requires fostering an inclusive and robust ethical AI ecosystem i.e. a holistic approach to AI application by integrating ethical principles into AI systems governance aligned with human values in terms of fairness, ethical competence, responsibility, etc.

A thorough review of higher education institutions policies and guidelines concerning Generative Artificial Intelligence integration within teaching and learning has been presented by Nora McDonald, Aditya Johri, Areej Ali and Aayushi Hingle Collier in the article 'Generative artificial intelligence in higher education: Evidence from an analysis of institutional policies and guidelines' [10].

According to their survey conducted, institutional policies and guidelines based on the degree to which they encouraged or discouraged the use of Generative AI are related to communication and curriculum guidance, lesson planning, privacy and ethics. The authors argue that encouraging the use of Generative AI the way many institutions do may not produce the learning outcomes desired. Their conclusion reads, 'Looking forward, the introduction of GenAI can be seen as a catalyst for changing assessment and evaluation practices that are more ecologically valid and grounded in principles of fairness, justice, and ethics, but these positive outcomes require, perhaps, a more thoughtful consideration of its role in the classroom' [10].

Marc Alier, Francisco José García-Peñalvo and Jorge D. Camba exploring the management and integration of Generative AI in educational settings, including the ethical considerations, best practices, and opportunities, underline the fact that 'GenAI can create original content that can be used to augment traditional teaching methods, creating a more interactive and personalized learning experience <...> Incorporating GenAI in educational settings also poses challenges related to academic integrity' [1]. The technology should be used to support and not replace the student's learning experience.

**Conclusion.** The analysis has shown that in the course of historical development of different types of technologies applied to education, the rapid growth of ICT in the digital age has performed the shift of the English language teaching and learning paradigm that has necessitated designing and implementing new technologies such as gamification, virtual and augmented reality, artificial intelligence alongside with traditional ones into teaching and learning process.

Much attention should be paid in further research to the issues of teacher's ICT literacy as well as to designing new curricula for the English language subjects such as 'English for Specific Purposes', 'English for Academic Purposes' etc. The vast potential of Generative AI in education should be regarded within its whole range, both opportunities and challenges taken into account.

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