

DIGITAL TRANSFORMATION IN LANGUAGE TEACHING: FROM TRADITIONAL METHODS TO ARTIFICIAL INTELLIGENCE

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Abstract

This article examines the digital transformation of language teaching and analyses the impact of contemporary digital technologies and artificial intelligence on the language-teaching process. It focuses on the evolution of traditional forms of instruction, the potential of digital educational technologies, and the main areas where artificial intelligence is applied in language teaching.

The advantages of using intelligent systems are examined, including the personalisation of instruction, the automation of instructional guidance, increased access to educational resources, and opportunities for online learning. The article identifies the main risks to academic integrity. It addresses issues of information reliability, the protection of learners' personal data, and the preservation of the teacher's leading role in the educational process.

Contemporary scholarly works related to the subject have been examined. Based on an analysis of the theoretical literature on the issues under investigation, the article demonstrates the need to integrate artificial intelligence technologies harmoniously into language education while preserving education's humanistic orientation of education and recognising the importance of the teacher's role as a mentor and facilitator.

It is concluded that the most promising model for the development of contemporary language education is one based on collaboration between the teacher and artificial intelligence. Such a model contributes to improving the quality of instruction, developing communicative competence, saving time and human resources, and fostering learners' digital skills.

Keywords: Language teaching, digital transformation, artificial intelligence, educator, educational process.

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Համառոտագիր

Սույն հոդվածում քննարկվում է լեզվի դասավանդման թվային փոխակերպումը, վերլուծվում են ժամանակակից թվային տեխնոլոգիաների և արհեստական ինտելեկտի ազդեցությունները լեզուների դասավանդման գործընթացի վրա: Առանձին ուշադրություն է դարձվում ուսուցման ավանդական ձևերի զարգացմանը, կրթական թվային տեխնոլոգիաների հնարավորություններին, ինչպես նաև լեզվի դասավանդման մեջ արհեստական բանականության օգտագործման հիմնական ուղղություններին:

Ուսումնասիրվում են բանական (խելացի) համակարգերի կիրառության առավելությունները՝ ներառյալ ուսուցման անհատականացումը, գիտելիքի ուղղորդման ավտոմատացումը, կրթական ռեսուրսների հասանելիության բարձրացումը, առցանց ուսուցման հնարավորությունները: Հոդվածում երևան են հանվում ակադեմիական բարեփոխության հետ կապված հիմնական ռիսկերը, տեղեկատվության հավաստիության, սովորողի անհատական տվյալների պահպանման, ինչպես նաև կրթական գործընթացում դասավանդողի առաջատար դերի պահպանմանն առնչվող հարցեր: Ուսումնասիրվել են թեմային վերաբերող ժամանակակից գիտական աշխատություններ, խնդրո առարկա հարցերի մասին տեսական գրականության վերլուծության հիման վրա ցույց է տրվում լեզվաբանական կրթության գործում արհեստական բանականության տեխնոլոգիաների ներդաշնակ ներմուծման անհրաժեշտությունը՝ պահպանելով կրթության մարդասիրական ուղղվածությունը, դասավանդողի՝ որպես մենթորի, կողմնորոշողի դերի կարևորությունը: Եզրակացություն է արվում, որ ժամանակակից լեզվաբանական կրթության զարգացման առավել հեռանկարային մոդելը դասավանդողի և արհեստական բանականության

համագործակցության մոդելն է, որն ապահովում է դասավանդման որակի բարելավում, հաղորդակցական հմտության զարգացում, ժամանակի և մարդկային ռեսուրսի խնայողություն և սովորողների մոտ թվային հմտությունների ձևավորում:

Բանալի բառեր՝ լեզվի դասավանդում, թվային փոխակերպում, արհեստական բանականություն, դասավանդող, կրթական գործընթաց:

Introduction

The Need for the Digitalization of Education

Today, it is difficult to imagine any sphere of social activity without the use of digital technologies. Over the past decade, digital technologies have advanced to the point that they have become an integral part of every domain of social life, including education (UNESCO, 2021; Holmes, Bialik, & Fadel, 2019). The development of the Internet, mobile phones, data-storage technologies, and artificial intelligence has substantially changed the learning process. Educational institutions increasingly incorporate digital tools to facilitate and deepen knowledge acquisition, enhance learning effectiveness, and make the educational process more flexible (Holmes & Tuomi, 2022; Miao & Holmes, 2023). Digital learning has gained particular significance in the field of language teaching, as modern technologies create new opportunities to develop communicative skills, promote learners' independent work, and enable autonomous engagement with linguistic material (Евтюгина & Безрукова, 2024).

Contemporary society has developed new perspectives on and expectations of language education. In the context of digital communication, language proficiency has become a key prerequisite for professional and social success. Whereas language education was previously centred on the teaching and application of grammatical structures, its current focus is on communicative competence, analytical thinking, the ability to work with information, and the appropriate use of language in a variety of specific contexts (Selwyn, 2019). Furthermore, today's learners expect more interactive, personalised, and technologically enriched forms of instruction. This necessitates a reconsideration of traditional approaches to language teaching (Tili et al., 2023).

Aim and Objectives of the Article

This article aims to analyse the digital transformation of the language-learning process and to determine the role of artificial intelligence within contemporary language-teaching methodologies.

To achieve this aim, the following objectives are addressed:

- to examine the principal traditional methods of language teaching and identify their distinctive characteristics;

- to analyse the impact of digital technologies on the development of language

teaching;

to determine the principal areas in which artificial intelligence is applied in language teaching;

to identify the advantages, disadvantages, and limitations associated with the use of artificial intelligence in the learning process;

to characterise the transformation of the educator's role in the context of the digitalisation of education;

to assess the prospects for integrating artificial intelligence technologies into language education.

Methodology

This article is based on a theoretical and analytical approach, which enables a comprehensive examination of the process of digital transformation in language teaching and the determination of the place of artificial intelligence within contemporary language-teaching practices (Miao & Holmes, 2023; OECD, 2021).

The methodological framework of the study comprises analytical, comparative, contrastive, and generalisation methods. The systematisation of the relevant scholarly literature (Holmes et al., 2019), together with the co-authors' teaching experience and classroom-based observations at the Armenian State University of Economics, provided the basis for the analysis and the conclusions presented in the study. The study examines publications from international organisations, regulatory documents, and works by specialists in digital learning and the application of artificial intelligence in the educational process (Miao & Holmes, 2023; European Commission, 2020).

We employed comparative and contrastive methods to identify the key characteristics of developments in language education. These methods allowed us to identify the advantages and disadvantages of traditional teaching methods, digital educational technologies, and artificial-intelligence assistants (Richards, 2006; Nunan, 2004). The systemic approach enabled language teaching to be considered as an integrated pedagogical system in which digital technologies and artificial intelligence function as interconnected elements influencing the content, organisation, and outcomes of education (Holmes et al., 2019; Selwyn, 2019).

The article also employs a scholarly interpretative and critical method, which has made it possible to synthesise the findings of contemporary studies and clarify promising directions for the integration of artificial intelligence and digital technologies into language teaching. It pays particular attention to the personalisation of learning, the changing role of the educator, academic integrity, and the ethical principles governing the use of artificial intelligence (Miao & Holmes, 2023; Selwyn, 2019).

The methodology enabled a comprehensive analysis of the subject and supported the formulation of scientifically substantiated conclusions about the prospects of language education in the digital age.

Traditional Methods of Language Teaching

Before the emergence of digital technologies, language teaching relied primarily on traditional pedagogical methods. Each of these methods reflected a particular understanding of the aims of language education and of the means by which linguistic material could be effectively acquired (Richards, 2006).

For a considerable period, the grammar–translation method was among the most widely used approaches. Its principal aims were the teaching of grammatical rules, the enrichment of vocabulary, and the development of translation skills. The educational process was organised around reading and the analysis of written texts and included grammatical exercises, work with new vocabulary, stylistic analysis, and generalisation. Although this method contributed to the development of analytical thinking and a profound understanding of language structure, it did not sufficiently promote the formation of oral communication skills (Nunan, 2004).

In the mid–twentieth century, the audiolingual method became considerably widespread. It emphasised repeated practice of linguistic structures and the development of automatic language habits through listening and pronunciation exercises. This approach focused particularly on the auditory and phonetic aspects of linguistic material. Learners completed numerous repetition–based exercises to reinforce language patterns. However, mechanical repetition often left learners struggling to communicate in specific real–life situations (Richards, 2006; Nunan, 2004).

From the late twentieth century onwards, the communicative approach assumed a leading position. It was founded on the principle of using language as a means of communication and interpersonal interaction. The principal aim of instruction became the development of communicative skills and the ability to understand and express oneself in various real–life situations (Richards, 2006). Within this approach, role–playing activities, dialogues, project–based assignments, and other interactive forms of work were widely employed. The communicative method remains one of the most widely adopted approaches today (Nunan, 2004; Levy & Stockwell, 2006).

Traditional methods of language teaching have played an important role in the system of language education and have provided the foundation for many contemporary pedagogical approaches. One of their principal advantages is the structured organisation of the educational process, which ensures the consistent acquisition of linguistic material. Systematic work on grammar and vocabulary contributes to the formation of a solid foundation of linguistic knowledge and makes it possible to monitor learning outcomes (Nunan, 2004).

In the traditional model of instruction, the teacher plays a significant role, serving as the principal source of knowledge and the organiser and supervisor of the educational process (Hampel & Stickler, 2015). This approach ensures a high degree of pedagogical guidance and enables learners’ errors to be corrected directly during the learning process.

At the same time, traditional methods have several limitations. The most significant problem is the insufficient individualisation of instruction. When working with a group, teachers find it difficult to account for each learner's individual characteristics, pace of learning, level of preparedness, and educational needs (Levy & Stockwell, 2006).

Furthermore, traditional teaching methods are limited by the duration of classroom time and do not always provide enough opportunities for practical work outside the classroom. Compared with contemporary digital technologies, another disadvantage is their relatively low level of interactivity. Traditional methods predominantly involve the passive acquisition of information, which may reduce learners' motivation and engagement in the educational process (Hampel & Stickler, 2015).

Despite these significant limitations, traditional methods continue to constitute important components of language education. The development of information technologies and changing societal educational needs have created a need for new approaches to instruction and have become drivers of the digital transformation of language teaching. These processes are examined in the following section of the article.

Digitalisation of Language Education

The development of information and communication technologies became a fundamental factor in the transformation of the contemporary educational environment (OECD, 2021; Miao & Holmes, 2023). In the late twentieth and early twenty-first centuries, educators began actively incorporating digital tools into the educational process, transforming how knowledge was acquired, communicated, and assimilated (European Commission, 2020).

Language education became one of the fields where new technologies found extensive application, because they offered opportunities to organise interactive instruction, communicate with native speakers without geographical limitations, and engage with authentic materials. During the initial stage of digitalisation, electronic textbooks and multimedia resources began to be used. Compared with traditional printed books, electronic materials allowed educators to integrate text, audio recordings, video materials, and interactive tasks into a single learning environment. This enabled learners to process information more effectively and to develop several language skills simultaneously (Hampel & Stickler, 2015).

The subsequent development of digital technologies led to the creation of specialised educational platforms and mobile applications. These resources let learners independently determine the intensity and duration of their work, receive immediate feedback, and practise language skills regularly. Distance learning acquired particular significance, as it enables learners to participate in educational programmes regardless of their geographical location.

The global processes of society's digital transformation provided a major impetus for the development of digital learning. As a result, digital technologies

evolved from supplementary tools into an important component of the educational process (OECD, 2021; European Commission, 2020).

Their integration substantially transformed the nature of language education. One of the major advantages of digitalisation has been the increased accessibility of educational resources. Today, learners can acquire knowledge from a variety of sources and access online libraries, electronic dictionaries, educational platforms, and multimedia materials at any time (Miao & Holmes, 2023).

Information technologies contribute to increasing the interactivity of instruction. The use of videos, virtual classrooms, simulation-based exercises, and game-based elements makes language learning more engaging and contributes to enhanced motivation. For example, multimedia resources enable learners to develop reading, writing, listening, and speaking skills simultaneously, thereby improving communicative competence (Hampel & Stickler, 2015).

Another important outcome of digitalisation is the expansion of opportunities for autonomous learning. Contemporary technologies enable learners to plan their educational activities independently, select learning materials in accordance with their own interests, and monitor their own progress. This approach promotes the development of autonomy, responsibility, and self-directed learning, all of which are highly important in contemporary society and for lifelong education (Siemens, 2005; UNESCO, 2021).

Furthermore, the digital educational environment creates favourable conditions for effective cooperation between learners and teachers. Digital means of communication allow information to be exchanged promptly and collaborative work to be organised.

However, the digitalisation of education also brings several challenges. Among these, learners' need for digital literacy and the risk of information overload require particular attention (OECD, 2021; Miao & Holmes, 2023).

Nevertheless, the advantages of digital technologies substantially expand the possibilities of language education and establish a foundation for the subsequent integration of more intelligent systems. The next stage of digital transformation was the application of artificial-intelligence tools, which open up new prospects for the individualisation of language learning and the enhancement of its effectiveness.

Artificial Intelligence in Language Education

The contemporary stage of digital learning is characterised by the active integration of artificial intelligence into the educational process (Miao & Holmes, 2023; Holmes et al., 2019). Artificial intelligence constitutes a combination of technologies that enables computer programmes to perform tasks traditionally requiring human intelligence, including information analysis, speech recognition, natural-language processing, decision-making, learning from accumulated data, and other related functions.

In the field of language education, artificial intelligence creates new opportunities to improve the effectiveness of instruction and adapt the educational

process to the needs of each learner. One of the most widespread areas of AI application is the use of intelligent tutoring systems. Such systems are capable of analysing learners' achievements, identifying difficulties and gaps in knowledge, and recommending exercises appropriate to their level of preparedness. As a result, instruction becomes more flexible and better aligned with individual needs (Holmes et al., 2019).

Chatbots and virtual assistants have also become widely used. They help learners practise the target language, improve their writing skills, and receive immediate feedback. Unlike traditional forms of instruction, virtual interlocutors are available at any time, substantially expanding opportunities for practical language use. This also reduces the teacher's workload.

By analysing task performance, the frequency of errors, the rate of material acquisition, and learning preferences, AI systems can generate individualised learning packages. For example, when a learner struggles with particular grammatical structures, the system automatically recommends exercises focused on those areas (Levy & Stockwell, 2006).

These systems also consider each learner's level of language proficiency level, allowing them to avoid tasks that are either too difficult or too elementary. AI systems are capable of monitoring the dynamics of learners' progress and predicting potential difficulties. This helps both learners and teachers promptly adapt and modify instructional materials and the learning process.

Another highly demanded area of AI application is the creation of educational materials. Artificial intelligence can generate exercises, reading texts, tests, vocabulary tasks, and discussion questions, taking into account learners' level of knowledge and the objectives of instruction. Large language models make it possible to use AI as an assistant in the development of writing skills. Learners can receive recommendations concerning textual structure, writing style, grammatical accuracy, and logical coherence. This contributes to the development of professional and academic writing skills.

Artificial intelligence also plays a particular role in the development of oral communication skills. Digital systems can analyse learners' pronunciation, identify phonetic errors, and recommend corrections. This makes it possible to practise spoken language regularly and frequently beyond the confines of classroom instruction (Levy & Stockwell, 2006).

Thus, artificial intelligence is becoming an important instrument of contemporary language pedagogy. It contributes to the accessibility of educational resources, ensures the personalisation of instruction, and expands opportunities for language practice.

Advantages and Risks of Artificial Intelligence Use

The active integration of artificial intelligence technologies into the educational process has generally received positive assessments. Nevertheless, it has also raised concerns among teachers, learners, and researchers, and these

concerns are well-founded. Despite artificial intelligence's considerable potential to improve instructional effectiveness, its application also comes with several limitations and risks that educators must consider when organising the educational process. First, educators should consider the advantages of artificial intelligence in teaching.

A major advantage of AI is its ability to personalise instruction to learners' individual needs. This makes it possible to create a more effective learning environment centred on the needs of a specific learner.

Whereas traditional assessment of written work requires considerable investment of time, AI systems can instantly analyse learners' responses and suggest strategies for correcting errors. This supports faster acquisition of material and creates opportunities for timely correction and refinement of knowledge (Levy & Stockwell, 2006).

Artificial intelligence substantially expands the opportunities for self-directed learning. Learners gain access to intelligent systems through which complex topics can be explained, and additional exercises on those topics can be provided at any time of the day and from any location. This accessibility of educational resources supports the development of self-education skills and enhances motivation (Siemens, 2005; UNESCO, 2021).

Another advantage is the reduction of the teacher's workload. The automation of assignment assessment, the preparation of educational materials, and the analysis of learning outcomes allow teachers to devote more time to creative and methodological work, as well as to individual interaction with learners.

Furthermore, artificial-intelligence technologies ensure access to diverse educational resources and contribute to the creation of an interactive learning environment. The use of chatbots, virtual advisers, and speech-recognition systems makes language learning more engaging and brings it closer to authentic communicative situations (Hampel & Stickler, 2015; Levy & Stockwell, 2022).

Despite its numerous advantages, the use of artificial intelligence in education is also associated with certain risks. One of the most widely discussed problems is the provision of unreliable information. Contemporary intelligent systems may produce factual errors, offer ambiguous formulations, and generate texts containing linguistic and semantic inaccuracies. Consequently, the outputs produced by AI require a critical approach on the part of both teachers and learners. In this context, the teacher's role becomes even more important in guiding learners appropriately.

Academic integrity is another serious concern. The accessibility of intelligent systems enables learners to use artificial intelligence to complete homework assignments, write essays, and prepare projects without undertaking sufficient independent work. This undermines the development of genuine skills and knowledge and reduces the educational value of learning activities.

Another risk is a possible decline in the level of direct human interaction.

Language education involves not only the acquisition of grammar and vocabulary but also the development of communicative skills, emotional intelligence, an understanding of cultural context, and interpersonal relationships. These skills cannot be fully developed solely through interaction with digital systems (Richards, 2006; Nunan, 2004).

The protection of personal data is also of considerable importance. To personalise learning, digital systems collect and analyse substantial amounts of information about learners. This requires compliance with information-security standards and a responsible approach to the processing and storage of personal data.

In addition, the effectiveness of AI tools largely depends on the level of digital literacy teachers and learners possess. Insufficient relevant skills may impede the introduction of new technologies and reduce their educational potential.

Thus, artificial intelligence creates extensive opportunities for improving language education. However, its integration must be supported by a pedagogically informed approach, adherence to ethical standards, and the maintenance of a balance between traditional forms of instruction and innovative technologies. Only under these conditions can artificial intelligence become an effective instrument of the educational process without in any way replacing the human factor (Selwyn, 2019; Holmes et al., 2019; Levy & Stockwell, 2006). The human factor remains, and will continue to remain, one of the most important components of language education.

Transformation of the Teacher's Professional Functions

Within the traditional model of education, the teacher performs the roles of knowledge transmitter, supervisor of the educational process, and evaluator. Contemporary technologies make it possible to automate these functions, including the assessment of assignments, the analysis of learning outcomes, and the provision of feedback. Consequently, the teacher's professional activity is increasingly shifting towards the organisation of the educational process, pedagogical guidance, and learner consultation (European Commission, 2020; Selwyn, 2019).

Today, the teacher is not merely a holder of knowledge but also a facilitator and mentor who helps learners navigate vast amounts of information, critically evaluate the information they receive, and use digital resources effectively. The teacher's ability to develop learners' skills in autonomous learning and the responsible use of artificial intelligence is becoming increasingly important (Siemens, 2005; Miao & Holmes, 2023). The teacher thus becomes an intermediary between learners and digital technologies. It is the teacher who determines the appropriateness of using a particular tool, selects the methods by which it should be integrated, and ensures that its application contributes to the achievement of educational objectives.

The effective use of artificial-intelligence technologies requires teachers to acquire new professional knowledge and skills. Contemporary teachers must have

digital literacy, understand the principles underlying the operation of intelligent systems operate, and be able to use them for educational purposes (OECD, 2021; European Commission, 2020). The development of digital competence includes working with educational platforms, automating the assessment and evaluation of assignments, creating digital materials, and analysing learning outcomes based on data provided by digital systems. Equally important are the ability to evaluate the quality of information generated by artificial intelligence and the capacity to identify errors or inaccuracies.

In the context of the continuous advancement of technology, teachers must be prepared for ongoing professional development. Mastering new digital technologies is becoming an important component of maintaining professional competitiveness and ensuring the high quality of the educational process (Hampel & Stickler, 2015; OECD, 2021).

One of the most promising directions in the development of contemporary education is the model of collaboration between human beings and artificial intelligence. Within this model, AI is regarded not as a replacement for the teacher but as a tool that expands the teacher's professional skills and capabilities. Artificial intelligence is capable of efficiently performing tasks involving large volumes of data, automating routine and repetitive activities, and personalising instruction. At the same time, the teacher retains the central role of creating an educational environment, developing learners' critical thinking, fostering motivation, and building interpersonal relationships (Selwyn, 2019; Levy & Stockwell, 2006).

Of particular significance is the fact that language education involves not merely the acquisition of grammar and vocabulary but also the study of cultural characteristics, social norms, and communicative challenges. These dimensions require human participation, empathy, and pedagogical experience, which artificial intelligence cannot fully reproduce.

Thus, the future of language education lies not in opposition between teachers and artificial intelligence but in their effective collaboration. The use of intelligent technologies makes it possible to enhance the quality of instruction, expand educational opportunities, and provide an individualised approach to every learner.

Digital transformation has therefore exerted a considerable influence on the development of language education. It has changed both teaching methods and the roles of the participants in the educational process. The shift from traditional teaching methods to digital technologies and artificial intelligence creates new opportunities to improve instructional effectiveness, individualise educational outcomes, and expand access to learning resources.

The present study has demonstrated that artificial intelligence technologies are capable of substantially improving the quality of language education through the automation of routine activities, the provision of prompt feedback, and the adaptation of educational materials to learners' individual needs. At the same time,

the use of artificial intelligence is accompanied by several challenges related to the reliability of information, academic integrity, and the importance of direct pedagogical interaction (UNESCO, 2021; Holmes et al., 2019; Selwyn, 2019).

Under these conditions, the teacher assumes a particularly important role as the organiser of the educational process and as a guide and adviser to learners within the digital educational environment. The future of language education depends on a harmonious, balanced combination of human pedagogical expertise and the capabilities of artificial intelligence capabilities. This approach lets us benefit from contemporary technologies without sacrificing education's humanistic values of education and ensures learners participate effectively in the digital age.

Conclusion

The digital transformation of education is a natural consequence of advances of information and communication technologies and substantially affects the content, methods, and organisational forms of language education (Miao & Holmes, 2023; OECD, 2021). In the context of the formation of a digital society, traditional approaches to language education are gradually being supplemented by innovative technologies aimed at enhancing the effectiveness of the educational process, expanding opportunities for interaction among its participants, and ensuring a higher degree of learning personalisation.

The analysis shows that, despite their significant contribution to language education, traditional methods often cannot always fully meet learners' contemporary needs or the demands of a rapidly changing information environment (Richards, 2006; Nunan, 2004). The development of digital technologies has contributed to the emergence of new instructional tools that provide access to educational materials, enhance the interactivity of learning, and expand opportunities for learners' autonomous work.

Artificial intelligence plays a significant role in contemporary system of language education and is becoming one of the most promising areas of educational technology. The application of AI systems can personalise education, automate the processes of knowledge assessment and monitoring, analyse learning achievements, and provide rapid feedback. Consequently, more favourable conditions are created for the development of language skills and the improvement of educational outcomes (Holmes et al., 2019; Miao & Holmes, 2023).

The findings of the study indicate that several organisational, pedagogical, and ethical challenges accompany the integration of artificial intelligence into the educational process. Of particular importance are the reliability of generated information, adherence to the principles of academic integrity, the protection of learners' personal data, and the prevention of excessive dependence on artificial intelligence within the educational process. These circumstances necessitate the development of a scientifically grounded approach to the integration of AI into educational practice, as well as the establishment of a regulatory and methodological framework for its use.

The study has also confirmed that the dissemination of intelligent technologies does not lead to a decline in the significance of the teacher within the educational process. On the contrary, under conditions of digital transformation, the teacher's role as an organiser, facilitator, adviser, and coordinator between learners and the digital educational environment becomes increasingly important. The effectiveness of AI use largely depends of the teacher's digital competence, their ability to critically evaluate how digital systems operate, and their capacity to ensure these systems are used pedagogically appropriately.

Thus, the future development of language education is not about replacing the teacher with artificial intelligence, but about creating an effective model of collaboration between them. The most effective approach combines AI's analytical and adaptive capabilities with professional expertise and pedagogical mastery. Such a model can balance technological innovation with education's humanistic orientation of education (Holmes et al., 2019; Levy & Stockwell, 2006).

The digital transformation of language education is a complex, multidimensional process that requires further scholarly examination. Promising directions for future research may include evaluating the effectiveness of integrating different artificial-intelligence models into language teaching, developing methodological guidelines for their use, and analysing the long-term impact of intelligent technologies on learners' language proficiency.

As digital society continues to develop, the rational and pedagogically grounded use of artificial intelligence may become one of the principal factors shaping contemporary language education.

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