Zhytomyr Ivan Franko State University Journal. Pedagogical Sciences. Vol. 1 (120)

Вісник Житомирського державного університету імені Івана Франка. Педагогічні науки. Вип. 1 (120)

ISSN (Print): 2663-6387
ISSN (Online): 2664-0155

MODERN TEACHING TECHNOLOGIES
СУЧАСНІ ПЕДАГОГІЧНІ ТЕХНОЛОГІЇ

UDC 37:004
DOI 10.35433/pedagogy.1(120).2025.17

EXPLORING DIGITAL TOOLS: TEACHERS' AND LEARNERS' EXPERIENCE

O. A. Chukhno[*], O. A. Chekhratova[**]

The rapid development of technology has reevaluated traditional teaching methods in education. The COVID-19 pandemic, the full-scale invasion in Ukraine, and the rise of artificial intelligence (AI) have all hastened the evolution of the educational context. This transformation has seen teachers increasingly incorporating digital tools into their pedagogical practices, leading to more engaged and motivated learners in a technology-driven educational context. Developing teachers' digital competence and ability to evaluate online tools critically is vital for effective communication; understanding students' attitudes to embrace new technologies is imperative. AI tools present unprecedented opportunities but must be approached with caution. Ensuring ethical and appropriate use of emerging technologies requires proper training and issuing of sufficient policies. The authors used a quantitative online survey method to study teachers' and learners' perspectives on digital tools in education. The survey involved 683 English language instructors and senior school and university students in Kyivska, Mykolaivska, Rivnenska, Sumska, and Kharkivska oblasts in Ukraine. The survey comprised anonymous questions to increase response rates and reliability. The study proved that the integration of digital tools in education possesses the potential to enhance the learning environment. Most respondents use digital tools in their professional or personal settings, with school and university students being the most devoted users. However, academic integrity concerns are evident, as most learners use digital tools for home assignments. In language learning/ teaching, most respondents use AI tools to practise grammar and vocabulary and improve reading skills but feel sceptical about the benefits of implementing online resources for developing speaking and pronunciation skills. The authors emphasise the importance of raising awareness among teachers and learners about the effectiveness of integrating online tools and developing specific standards and rules of AI tools utilisation within educational institutions.

Keywords: *digital tools, artificial intelligence (AI), language learning, educational process, digitalization, learning outcomes, distance learning*

[*] Candidate of Pedagogical Sciences (PhD in Pedagogy), Associate Professor
(H.S. Skovoroda Kharkiv National Pedagogical University)
chukhno.oa@hnpu.edu.ua
ORCID: 0000-0001-9601-3321
[**] PhD in Educational, Pedagogical Sciences, Associate Professor
(H.S. Skovoroda Kharkiv National Pedagogical University)
o.chekhratova@hnpu.edu.ua
ORCID: 0000-0002-7022-2042

Zhytomyr Ivan Franko State University Journal. Pedagogical Sciences. Vol. 1 (120)

Вісник Житомирського державного університету імені Івана Франка. Педагогічні науки. Вип. 1 (120)

ДОСЛІДЖЕННЯ ЦИФРОВИХ ІНСТРУМЕНТІВ: ДОСВІД УЧИТЕЛІВ ТА УЧНІВ

О. А. Чухно, О. А. Чехратова

Стрімкий розвиток технологій призвів до переоцінки традиційних методів навчання. Пандемія COVID-19, повномасштабне вторгнення в Україну та розвиток штучного інтелекту (ШІ) прискорили еволюцію освітнього контексту. Ця трансформація призвела до того, що вчителі більше впроваджують цифрові інструменти у свою педагогічну практику, що сприяє підвищенню зацікавленості та вмотивованості учнів в цифровому освітньому контексті. Розвиток цифрової компетентності вчителів та їхньої здатності критично оцінювати онлайн-інструменти є важливим для ефективної комунікації; розуміння ставлення учнів до нових технологій є обов'язковим. Інструменти ШІ відкривають майже необмежені можливості, але до них слід підходити з обережністю і забезпечити етичне та належне використання нових технологій. Автори використовували онлайн-опитування для вивчення ставлення педагогів та учнів до цифрових інструментів в освіті. В опитуванні взяли участь 683 викладачі англійської мови, учні старших класів і студенти з Київської, Миколаївської, Рівненської, Сумської та Харківської областей України. Опитування складалося з анонімних питань для підвищення ефективності і надійності. Дослідження довело, що інтеграція цифрових інструментів в освіту має потенціал для покращення освітнього середовища. Більшість респондентів використовують цифрові інструменти у своїй професійній та особистій діяльності, а найбільш відданими користувачами є школярі та студенти. Однак проблеми академічної доброчесності є очевидними, оскільки більшість учнів використовують цифрові інструменти для виконання домашніх завдань. У вивченні/викладанні мов більшість респондентів використовують інструменти ШІ з метою вивчення граматики і лексики та покращення навичок читання, але скептично ставляться до переваг впровадження онлайн-ресурсів для розвитку навичок говоріння і вимови. Автори наголошують на важливості підвищення обізнаності педагогів та учнів/студентів щодо ефективності інтеграції онлайн-інструментів та розробки стандартів і правил використання інструментів штучного інтелекту в закладах освіти.

Ключові слова: *цифрові інструменти, штучний інтелект (ШІ), вивчення мови, освітній процес, діджиталізація, результати навчання, дистанційне навчання*

Introduction of the issue. In the rapidly changing landscape of education, the use of traditional teaching forms and methods is being questioned due to the rise of technology. Ranging from online resources and virtual classrooms to interactive software and learning management systems, digital tools are designed and utilised to enhance the teaching and learning experience. In the times of digitalisation, it is crucial for both learners and educators to be aware of the technologies, their benefits and drawbacks and be acquainted with the safety rules of their application in professional settings [8], integrating digital tools in the interaction between students, instructors, and institutions [19].

Without a doubt, the incentive for the phenomenal pace of adopting information and communication technologies (ICT) was the COVID-2019 pandemic and the pressing need to search for new ways and ideas in education [3; 4; 6; 14]. The virus outbreak encouraged educators to adapt to the changes quickly, search for new tools and methods urgently and learn how to implement them on the go. In Ukraine, with the full-scale invasion [8], educators face even more challenges, proving that all the participants of the educational process need to be ready for transformation, no matter how hard and unexpected they may appear.

Digital and virtual technologies have already ensured major changes within the traditional pedagogic environment [19], and with the advent of artificial intelligence (AI), the scale and speed of changes can hardly be measured; the emerged technology constantly develops and competes with technological improvements in the teaching and learning context [18].

As the primary facilitators of learning, educators have a pivotal role in incorporating digital tools into their

pedagogical practices. Their attitudes, proficiency, and willingness to adapt to new technologies significantly influence the effectiveness of these tools in the classroom. Thus, developing teachers' digital competence and ability to critically evaluate all the tools and methods available is vital for effective communication in the educational context [11]. Understanding teachers' perspectives on the benefits and challenges of digital tools is crucial for developing strategies that support their professional growth and enhance their teaching experience.

Equally, learners' attitudes and willingness to test new technologies for training, revising, checking and assessing their skills is imperative and must be considered. Understanding students' perspectives and perceptions of digital tools designs and shapes the educational process and influences the predicted outcomes. The shift towards a digital learning environment demands re-evaluating how students engage with content, collaborate with peers, and receive feedback.

Despite the growing number of digital tools and resources that can be applied in education and the concerns their implementation raises, teachers and learners understand the need to explore the perspectives and the opportunities for their integration. Ensuring teachers' and learners' ethical, appropriate and efficient use of emerging technologies presupposes proper training and issuing of sufficient policies. It is evident that education cannot refrain from using AI tools [15]; thus, it is time to embrace the changes and make them work for the benefit of the educational process.

Current state of the issue. In the modern educational environment, which provides prospects for innovating the teaching and learning process [9], and where most students possess considerable technical knowledge and do not perceive technological changes as hardship [10], it is essential that teachers are equipped with significant digital skills and competencies [3] and gain relevant experience in applying ICT in distance and blended education [16]. This is also proved by the results of the research on SMART Society [23], which determines digital skills (the aptitude for applying knowledge and abilities to the analysis, interpretation, and selection of data) as the key to using ICT effectively and efficiently within academic interaction.

Surprisingly, the issue is pressing in higher education institutions, which possess the resources to develop digital competencies but still have a long way to go [3]. This thought is confirmed by the research on university professors displaying insufficient technological competencies and the problems related to this discrepancy [4]. Çetin [7] argues that the teachers of the future are to be trained in technological pedagogical content as digital competencies are vital for them. The acquired technological skills will help educators make planning and designing educational materials less time-consuming, ensure individualisation and differentiation of education, expand the materials given and generate tasks and activities [17]. Teachers' digital competence guides successful student learning [12].

Scholars also investigate the issues and challenges educators face while integrating various online platforms into the teaching and learning process [1; 2; 13; 20; 27], whereas the question of AI implementation in education promises room for improving the personalisation of training, its design and assessment, as well as creating opportunities for students engagement and ensuring the quality of education [11; 15; 17]. In times when great emphasis is put on ensuring life-long learning and developing individual educational trajectories [6; 25], AI tools provide almost unlimited opportunities while testing the institutions' policies and principles. Still, both students and teachers are expected to realise the benefits and limitations of using emerging technologies. Hence, they need to undergo specific training to ensure that they meet their educational goals [18].

According to the research results in Romania [19], using AI resources presents almost no challenges for the students who emphasise that such tools benefit their academic performance though the skill of substantiating trustworthy and accurate information from outdated or erroneous one

is still to be developed. Händel et al. [10] conducted comprehensive research and proved that German higher education students' digital readiness is satisfactory, and they are willing to continue its development. Without a doubt, learners (school children and University students [8]) require thorough training on the acceptable application of digital tools [16; 18].

Overall, scholars do agree that AI tools present unprecedented opportunities but have to be approached with cautiousness [22]. Thus, what we encounter in the educational system now concerns mostly the interest in using digital tools and the fear of misusing them. The abundance of AI resources makes it possible to cater to almost every learner's and teacher's needs, but where the line is between being creative and innovative versus biased and inappropriate is yet to be discovered.

Aim of the research is to explore the perspectives of teachers and learners on the use of digital tools in education. By examining these perspectives, the study aims to identify the key factors that contribute to the successful integration of digital tools in teaching and learning processes, assess the level of readiness of using digital resources for teaching and learning, investigate the correlation between the age of the participants of the educational process and their ability to use the technology, and identify the barriers in the successful implementation of innovative technologies.

Research methods. To explore teachers' and learners' perspectives on the use of digital tools in education, the authors applied a quantitative online survey method. This method was chosen for several reasons. Firstly, it simplifies the acquisition of extensive datasets from the study population through predefined questionnaires. Secondly, it can be considered practical due to the minimisation of the temporal and financial investments required for its implementation. Furthermore, it enables researchers to engage all participants simultaneously while ensuring the automated organisation of the collected data. Finally, this method mitigates potential subjective influences while collecting, analysing and interpreting the findings.

The survey involved 683 English language instructors as well as senior school (Grades 10 and 11) and university students. They all work or study in different educational institutions in Kyivska, Mykolaivska, Rivnenska, Sumska, and Kharkivska oblasts in Ukraine. The rationale for selecting this particular age category of students lies in their exhibiting a notable degree of autonomy, rendering them adept at using online tools with efficacy compared to younger learners. The maturity of senior school students and their developed cognitive abilities enable them to navigate digital platforms and applications on their own in order to enhance their language proficiency. Moreover, their advanced critical thinking skills empower them to reflect on their own learning experience and assess the effectiveness of different learning tools and strategies.

The investigators devised and distributed an online survey via Google Forms. The survey comprised eleven closed-ended questions. To optimize response rates and increase data reliability, the researchers refrained from soliciting students' email addresses or names, thereby making the survey anonymous. Each user was restricted to providing only one response. Basic statistical tools were employed to analyse the received data.

Results and discussion. The implementation of digital tools in education is considered to be innovative, and most educational institutions encourage instructors to implement technology in the teaching and learning process. Moreover, it is not limited to one or several subjects but to almost every discipline available.

For instance, in teaching chemistry, online resources make the classes more visual, interactive, and memorable, ensuring a constant exchange of information between students and a teacher; digital exercises contribute to the qualitative acquisition of competencies in the subject, as well as to self-education and self-improvement, increasing learners' study motivation; applications for creating virtual laboratory works assist in understanding the essence of

all chemical processes, the connection between chemistry and life, and develop practical skills in performing a chemical experiment [24].

Exploring various types of digital tools in teaching mathematics and physics, researchers proved that intelligent systems are likely to have a more powerful effect on learners' outcomes than drilling and practising with the traditional approach [12]. Using online resources during such classes also increases students' study motivation and promotes self-learning and collaboration [9].

In Ukraine, special attention is drawn to implementing the standards of STEM education and a pressing need to educate teachers of these disciplines to use digital tools and resources [14]. The research results prove that properly selected digital and virtual reality tools support the educational ecosystem and make the STEM learning process more motivating and effective; without these technologies, classes may become monotonous, disengaging, and lead to wasted resources (effort, energy, and time) for all participants in the educational process [14].

In China, practical research has proved the far-reaching impact of using digital resources on developing creative thinking and logical skills in STEM education [26]. Moreover, while making the educational process more interactive, online tools also vary the design and features of teaching and learning materials and instructions [12].

In engineering studies, the use of digital tools establishes flexibility in education and almost unlimited access to information, shifting the value of the traditional teaching approach with the help of technological means [9] and confirming students' willingness to proceed with the emerging technology implementation [5]. On the other hand, when getting some help with generating software code or researching answers, students sometimes miss the opportunity to find the core of the problems and all possible solutions [18].

Digital tools in language learning are a vast terrain full of opportunities and issues. In the context of mastering foreign languages, implementing AI tools in the educational process ensures personalisation and engagement, as well as provides almost instant feedback and academic statistics [17]. The use of online resources can assist instructors in introducing vocabulary, designing and unfolding communicative situations; AI can help break psychological speech barriers or eliminate common grammar issues [21].

Despite all the benefits of using AI in language learning, the instructors should give learners adapted materials and specific instructions for accessing digital tools; moreover, the resources are to be embedded in the curriculum for providing ongoing monitoring [17].

Given these facts, we delve into the teachers' and learners' perspectives on the use of digital tools in education in general and in language learning and teaching. The results of the survey are presented in the tables and figures below.

Table 1

Respondents' Occupation and Age

Question 1		***Question 2***	
I am ...	***Number of respondents***	***My age is...***	***Number of respondents***
a) a school student	385 (56.4%)	15-17 y.o.	445 (65.2%)
b) a university student	202 (29.6%)	18-22 y.o.	128 (18.7%)
c) a school teacher	48 (7%)	23-30 y.o.	21 (3.1%)
d) a university teacher	58 (8.5%)	31-45 y.o.	47 (6.9%)
		46-60 y.o.	35 (5.1%)
		61 y.o.-older	7 (1%)

As it can be seen from Table 1, the questionnaire encompassed 385 (56.4%) senior school students, followed by 202 (29.6%) participants representing university students, 48 (7%) school teachers of English, and 58 (8.5%)

university-level educators. Notably, 6 (0.9%) respondents identified themselves as concurrently performing the roles of both university students and school teachers, presumably engaged in pursuing academic degrees and undertaking teaching responsibilities. Additionally, a smaller proportion of participants, totalling 3 (0.4%) individuals, indicated a dual role involving employment both at school and university, while 1 (0.2%) respondent assumed a dual position of a university educator and a student.

The majority of participants, comprising 445 individuals (equivalent to 65.2% of the total sample), fall within the age bracket of 15-17 years, characteristic of senior school students and first-year university attendees. Furthermore, 128 respondents (18.7%) are university students aged between 18 and 22 years. The other 110 participants (16.1%) are aged 23 years or above, fulfilling roles as practitioners within the realm of the English language.

Figure 1 presents the data on the frequency of using online tools by the survey participants.

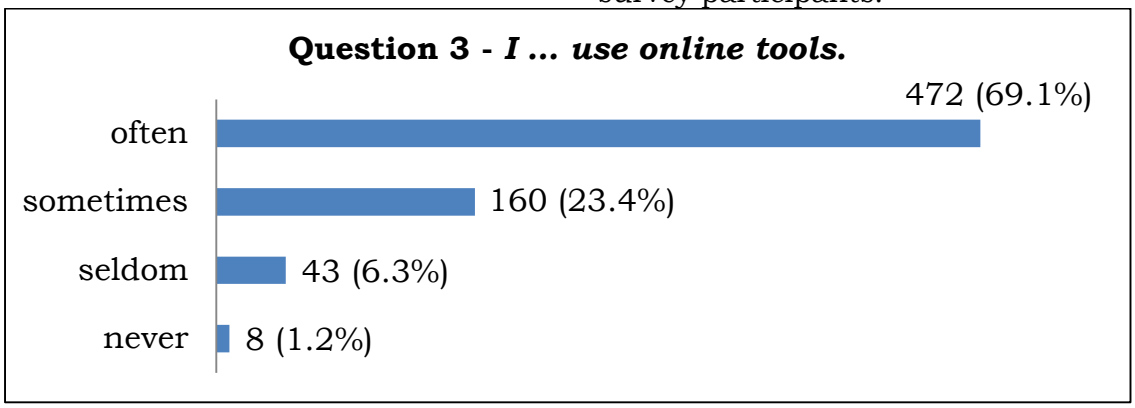

Fig. 1. Frequency of Using Online Tools

The findings show that the overwhelming majority of the respondents (92.5%) use online tools frequently or occasionally with a minority subset of 7.5% demonstrating infrequent or no usage. Such results imply the recognition of the effectiveness and convenience offered by online tools in various contexts, e.g. education, communication, and information access. The relatively low percentage of respondents reporting infrequent or no use (6.3% and 1.2% correspondingly) may indicate their preference for conventional methods and approaches or their reluctance to deal with potential obstacles which a person may encounter while navigating online tools. Overall, these findings are another proof of the increasing reliance on digital resources in the contemporary education which necessitates carrying out in-depth research into the patterns educators and learners use online tools.

Table 2 demonstrates the reasons for infrequent use of online tools by the participants of the survey.

Table 2

Reasons for Rare Online Tools Usage

Question 4	
I do not use/seldom use online tools because... .	***Number of respondents***
a) Most of them are not free	19 (37.3%)
b) I find it hard to understand the interface	12 (23.5%)
c) My internet connection is not reliable	8 (15.7%)
d) I consider traditional materials (e.g. textbooks) more useful	22 (43.1%)
e) Other reason(s)	5 (9.8%)

The primary factors contributing to the reluctance in adopting online tools for English language teaching and learning include financial constraints (37.3%) and scepticism regarding their efficacy compared to conventional instructional materials (43.1%). This is followed by navigation difficulties (23.5%) and unreliable internet connection (15.7%). Among other reasons stated by the participants are laziness, lack of opportunity provided by the teacher, and ignorance about online tools efficacy.

Therefore, English language instructors and learners should be introduced to the realm of high quality free online tools which may facilitate their learning and teaching and, consequently, change their attitude to digital resources.

The correlation between the age of the respondents and their reluctance to use online tools is presented in Table 3.

Table 3

Correlation between Respondents' Age and Their Infrequent Use of Online Tools

Age	***Number of respondents***	***Seldom/never use online tools***	***Occupation***
15-17 y.o.	445	1 (0.2%)	university student
		35 (7.9%)	senior school student
18-22 y.o.	128	4 (3.1%)	university student
23-30 y.o.	21	1 (4.8%)	school teacher
31-45 y.o.	47	3 (6.4)	university teacher
46-60 y.o.	35	6 (17.1%)	university teacher
61 y.o.-older	7	1 (14.3%)	university teacher

As indicated in Table 3, among the participants who are 46 or older, the number of those who never or rarely use online tools doubles compared to the youngest age set. The main reasons for reluctant use of online tools stated by this category of the respondents are challenging interface (71.4%) and a preference of traditional materials (57.1%).

Surprisingly enough, 14 out of 36 youngest respondents (38.9%) who never/seldom use online tools also opt for higher effectiveness of traditional textbooks as the main reason behind this practice. We assume that they may be biased due to lack of exposure to high quality platforms and applications. Another reason may be that some students belong to the formal learner type favouring more structured traditional instruction. Furthermore, these learners might have had a negative experience of using online tools which resulted in avoiding them in their learning. 7 learners (19%) opted for difficulty with interface, and 11 students (30.6%) stated that such tools are not free of charge.

Hence, it is imperative to raise teachers' and learners' awareness, especially among senior school students and older generations of educators, regarding the effectiveness of integrating online tools alongside traditional pedagogical resources to enhance language acquisition.

The purposes for which English language instructors and learners often/sometimes use online tools are provided in Table 4.

Table 4

Purposes for Online Tools Usage

Question 5	
I use online tools for … .	***Number of respondents***
a) learning English on my own	362 (57.3%)
b) developing teaching and learning materials	149 (23.6%)
c) doing home assignments	457 (72.3%)
d) writing articles	173 (27.4%)
e) other reason(s)	20 (3.2%)

As evidenced in Table 4, the predominant use of online tools primarily revolves around doing home assignments. This option was selected by 457 English learners, constituting 72.3% of the sample. Self-directed learning emerges as another significant purpose, which is indicated by 362 (57.3%) respondents. Remarkably, the data reveals that 37 English language instructors, comprising 34.9% of the 106 surveyed, engage in ongoing language learning through online tools. Among these educators, 13 are university teachers, 23 work at school, and one individual holds a dual role. This substantiates the efficacy of online tools in fostering continuous professional development and lifelong learning.

A total of 149 respondents, representing 23.6% of the sample, use online resources for the development of English teaching and learning materials. Among these participants, 77 individuals are educators, comprising 72.6% of this category. This observation suggests that a vast majority of teachers either replace or supplement conventional ELT materials with resources they create themselves or select from those already available online. However, approximately a quarter (27.4%) of educators opted against this avenue, possibly indicating a preference for traditional materials or facing impediments such as financial constraints, technological limitations, or inadequate digital proficiency.

The remaining 72 respondents, who leverage online tools for material creation, are university and senior school students, constituting 12.3% of the total. It is plausible that these individuals engage in tutoring activities or generate materials for personal use, which needs further investigation. Noteworthy is the emergence of contemporary AI-driven educational tools, which offer diverse avenues for content generation tailored to specific educational contexts. Consequently, initiatives such as specialised workshops could be implemented to acquaint learners with the affordances of generative technologies, thereby fostering learner autonomy in English language acquisition and increasing their exposure to the language.

A notable contingent of 173 participants, representing 27.4% of the sample, indicated employing online tools for writing articles. They are both educators and university students. Further investigation needs to be done into how exactly online tools are used for this purpose and whether users adhere to principles of academic integrity in their writing endeavours.

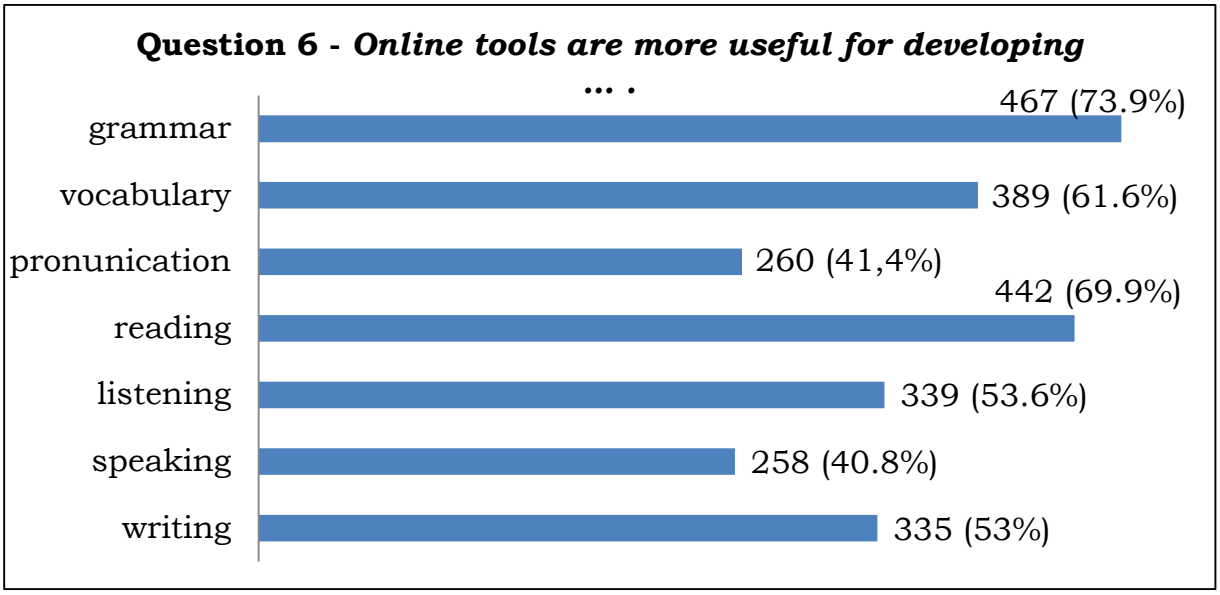

Fig. 2. Efficacy of online tools for developing communicative skills

Additionally, a minor subset of 20 respondents, constituting 3.2% of those who frequently or occasionally utilise online tools, stated that they do it for gaming, self-assessment, retrieving information, entertainment, blogging, reading, and project completion. The diversity of purposes online tools can be used for underscores their multifaceted utility, which educators and learners alike should harness to their advantage.

Question 6 sought to explore the perspectives of participants regarding the efficacy of online tools in developing different communicative skills (see Fig. 2).

The overwhelming majority of the participants consider that online tools are most useful for learning/teaching grammar (73.9%) and improving reading comprehension skills (69.9%). Moreover, 61.6% of respondents acknowledged the effectiveness of online resources in bolstering vocabulary acquisition. Approximately half of the respondents perceived online platforms and applications as beneficial for refining competences in listening (53.6%) and writing (53%). Furthermore, nearly 40% of participants considered that online tools are conducive to the development of pronunciation and speaking skills.

These findings lead to several assumptions. The evolution of online educational technology has first witnessed the emergence of digital resources comprising textual and graphical elements alongside drilling activities equipped with automated feedback mechanisms. Consequently, educators and learners may exhibit a higher degree of familiarity with these resources compared to audiovisual materials, hence hailing grammar, vocabulary, and reading as areas where online tools exhibit superior efficacy. Secondly, mastery of pronunciation and speaking necessitates the utilisation of voice recognition and AI tools capable of providing immediate feedback. Likewise, the acquisition of proficient writing skills is contingent upon feedback provision. Given the relative novelty of such technologies, participants might be unaware of their benefits or apprehensive of the potential obstacles they might encounter while dealing with new tools. Thus, educators and learners should be introduced to high-quality voice recognition and AI educational tools which can be effective for developing oral communication skills, namely pronunciation and speaking.

Table 5 presents the findings regarding the participants' attitudes towards AI tools.

Table 5

English Language Instructors' and Learners' Attitudes to AI Tools

Question 7							
	Age and number of respondents						
My attitude to AI tools is	Total	15-17 y.o.	18-22 y.o.	23-30 y.o.	31-45 y.o.	46-60 y.o.	61 y.o.-older
a) positive	301 (44.1%)	209 (47%)	56 (43.8%)	6 (28.6%)	17 (36.2%)	10 (28.6%)	3 (42.9%)
b) more positive than negative	263 (38.5%)	172 (38.7%)	51 (39.8%)	10 (47.6%)	17 (36.2%)	11 (31.4%)	2 (28.6%)
c) more negative than positive	43 (6.3%)	20 (4.5%)	7 (5.5%)	3 (14.3%)	6 (12.8%)	6 (17.1%)	1 (14.3%)
d)negative	14 (2%)	5 (1.1%)	5 (3.9%)	1 (4.8%)	1 (2.1%)	2 (5.7%)	-
e) hard to answer (no experience of using AI)	62 (9.1%)	39 (8.8%)	9 (7%)	1 (4.8%)	6 (12.8%)	6 (17.1%)	1 (14.3%)

As indicated in Table 5, a notable majority of respondents (82.6%) exhibit either a positive or predominantly positive attitude towards AI technology. However, an age-related trend is discernible, with older participants displaying less favourable attitudes: 85.7% of individuals aged 15-17 express preferences for variants "a" or "b", whereas only 60% of those aged 46-60 selected these options. Furthermore, among educators aged 46-60, there are four times as many individuals who exhibit a negative or predominantly negative attitude towards AI compared to their younger counterparts. This observation may be attributed to the relatively lower adaptability of older generations to technological innovations, thus fostering apprehension about AI adoption.

Another contributing factor could be the dishonest use of AI generative tools by students, who often resort to copying generated responses. Given that such practices do not foster cognitive development among learners, some educators may perceive AI generative technology as detrimental rather than beneficial. Consequently, there emerges a necessity for educators to adopt a comprehensive approach in designing assignments that are less amenable to AI manipulation, such as collaborative projects and personalised tasks. Nonetheless, to harness the potential of modern technology in engaging learners, AI tools can be employed to augment certain aspects of the learning process, such as brainstorming ideas. At the same time, it is imperative to develop awareness among learners regarding the consequences of unethical use of generative tools, including cognitive stagnation, compromised academic performance, and potential disciplinary measures such as expulsion.

Approximately 9% of the total sample have never used AI technology, with the lowest incidence observed among university students (aged 18-22) and young English teachers (aged 23-30), and the highest among older educators (aged 46-60). Hence, it is necessary to facilitate familiarity among these categories with novel generative technologies and to create guidelines for their appropriate implementation.

The reasons underlying participants, favourable or unfavourable attitudes towards AI are provided in Table 6.

Table 6

Reasons Behind Negative and Positive Attitudes Towards AI Tools

Question 8 I feel negative about AI tools because... .	***Number of respondents***	***Question 9 I feel positive about AI tools because they allow me to ... .***	***Number of respondents***
a) they do not enhance thinking skills	30 (52.6%)	a) generate educational materials quickly	349 (61.9%)
b) AI-generated information is not reliable	31 (54.4%)	b) find answers to any questions instantly	387 (68.6%)
c) their use leads to violating academic integrity	19 (33.3%)	c) generate new ideas at once	242 (42.9%)
d) other reason(s)	4 (7%)	e) other reason(s)	6 (1.1%)
Total	57 (100%)	Total	564 (100%)

The data reveals that more than 60% of respondents who hold a positive view of AI appreciate its ability to quickly create educational materials and provide answers to queries. Approximately 43% of these individuals express a preference for AI due to its capacity for swiftly generating novel ideas. Among other reasons stated by 6% of the sample are opportunities to edit, translate,

paraphrase texts, do home assignments, explore the topics not covered by instructors, as well as generate visual and auditory content such as images and music.

Among the respondents who hold negative attitudes towards AI, the prevailing sentiment is scepticism regarding the reliability of generated information, a perspective embraced by 54.4% of this category. One participant further explains that verifying AI-generated content entails significant time investment, coupled with the risk of unintentional errors. Individuals may place undue trust in AI-generated information, particularly when lacking proficiency in a given subject matter.

A comparable proportion of respondents (52.6%) expressed reservations that AI tools do not enhance cognitive skills, while approximately one-fifth consider that using AI tools may lead to academic integrity violation. This correlates with our conjectures drawn from the analysis of responses to Question 7. 7% of participants expressing general negativity towards AI offer personalised comments, such as "AI can leave teachers without work", "I don't want to be like my students", and "People stop thinking by themselves".

As AI technology increasingly permeates various facets of contemporary life, it is necessary to harness its potential. Therefore, special guidelines should be developed to help educators and learners of English to use AI in their studies and work appropriately, thereby maximising their efficacy while mitigating potential risks. These guidelines should serve as a roadmap for navigating the integration of AI into educational settings without compromising academic integrity or student cognitive development.

Question 10 focused on the means which teachers and learners consider effective for developing the skills of using online tools.

Table 7

Effective Ways of Learning how to Use Online Tools

Question 10	
The most effective means of developing the skills of using online tools in teaching/learning English is … .	***Number of respondents***
a) exploring online tools on one's own	324 (47.4%)
b) taking part in various events (webinars, workshops, etc.)	150 (22%)
c) exchanging experience with other learners/colleagues	188 (27.5%)
d) other	21 (3.1%)

47.4% of the respondents prefer to explore online tools by themselves which might suggest that they value self-directed learning. 22% of the respondents opted for participating in different events. This indicates that a considerable number of participants recognise the benefits of more formal training opportunities. 27.5% of the participants stated the effectiveness of knowledge sharing which indicates their preference for collaborative learning. 5 (0.7%) participants recommend combining all the aforementioned means.

Overall, the results suggest that there is a diverse range of preferences among teachers and students when it comes to developing skills of using online tools for teaching and learning English. While self-exploration is favoured by a notable percentage, structured learning opportunities and peer collaboration are also valued. This highlights the importance of offering a variety of learning and professional development opportunities to cater to the diverse needs and preferences of educators and students.

Finally, to respond to Question 11, the participants had to assess their skills of using online tools (see Fig. 3).

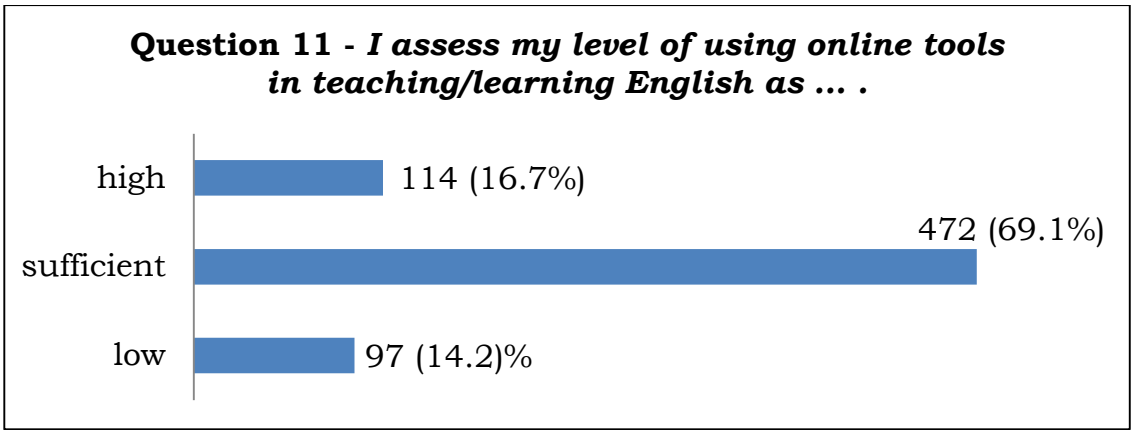

Fig. 3. Respondents' level of the skills of using online tools

A vast majority of the participants (69.1%) perceive their level as sufficient which suggests that they feel competent enough in using online tools for teaching and learning English, although they may not consider themselves experts. There is a much smaller proportion of individuals (16.7%) who feel extremely confident and proficient in utilising digital tools effectively. Approximately the same number of the respondents may struggle with using online tools effectively since they assessed the level of their skills as low.

The correlation between the perceived level of the abovementioned skills and the age of the participants is as follows. Among the youngest participants, who are senior school students, 17.3% assess their level as low. Among teachers aged 46 or above this index is higher, constituting 24%. In the age group of 18-22 years old, only 5.5% of the respondents think that they manifest incompetence in online tools use. Interestingly, no participants aged 23-30 selected this option. These findings align with the results of the participants' responses to Question 4, where the predominant demographic displaying infrequent use of online tools comprises senior school students and educators aged 46 and above.

This data could inform educational institutions and stakeholders about potential areas for targeted training and support, especially for older teachers and 15-17 year-old learners who may feel less confident with online tools. It also highlights the need for further investigation into why certain age groups perceive their skills differently, which could inform strategies for improving skill levels across different demographics.

Conclusions and research perspectives. Integrating digital tools into education has shown considerable potential in enhancing the learning environment. The research has proved the suggested idea that the majority of the respondents frequently implement digital tools in their professional or personal settings. But despite the availability of various AI tools, it's crucial for teachers and learners to critically evaluate AI and adapt the resources to fit modern educational standards and personal goals.

The survey results confirm the hypothesis that the most devoted users of digital tools are school and university students, and there is a clear correlation between instructors' age and the frequency of executing AI resources in the educational process.

The authors also draw attention to academic integrity concerns, which is hardly surprising, as most learners confess to the repeated use of digital tools for completing home assignments. That means educational institutions need to raise awareness and train instructors and students on how to ethically and effectively use digital tools and alter traditional resources and materials to fit the challenges of the modern world.

Remarkably, more than a quarter of younger responders never or seldom utilise AI tools and advocate the efficiency

of only conventional teaching methods and materials. We speculate it can be explained by the fact that they have certain negative experiences (app pricing, erroneous information or negative results of tool implementation) that may have caused their prejudiced or biased opinion.

The majority of the survey participants believe that AI tools are helpful in learning/teaching grammar and vocabulary and developing reading comprehension skills. However, the respondents are quite sceptical about using digital resources to improve speaking and pronunciation skills. The authors suppose that due to the relative novelty of these technologies, the participants may not be aware of their advantages or may be concerned about possible challenges while using new tools.

More significant concerns on the implementation of AI tools are expressed by senior educators who emphasise the issues of dishonest application of the tools. Most respondents tend to proceed with investigating the benefits of online tools and consider themselves competent enough to use online tools for teaching and learning English.

Hence, it is imperative to raise teachers' and learners' awareness, especially among senior school students and the older generation of educators, regarding the effectiveness of integrating online tools alongside traditional pedagogical resources to enhance language acquisition. The authors believe that innovative technologies can help make the educational environment more engaging, motivating and autonomous, simplifying routine tasks and providing new opportunities for academic achievements.

We consider it vital to continue the research on AI tools in the educational context, particularly in developing and adhering to institutions' standards and policies on AI implementation, investigating the effectiveness of specific training programmes for educators and measuring the long-term effects of digital tools on student academic performance and engagement.

REFERENCES (TRANSLATED & TRANSLITERATED)

1. Aljawarneh, S.A. (2020). Reviewing and exploring innovative ubiquitous learning tools in higher education. *Journal of Computing in Higher Education,* 32(1), 57-73. DOI: https://doi.org/10.1007/s12528-019-09207-0 [in English].

2. Anderson, T., & Rivera-Vargas, P. (2020). A Critical Look at Educational Technology from a Distance Education Perspective. *Digital Education Review,* 37, 208-229. DOI: https://doi.org/10.1344/der.2020.37.208-229 [in English].

3. Basilotta-Gómez-Pablos, V., Matarranz, M., Casado-Aranda, L.-A., & Otto, A. (2022). Teachers' digital competencies in higher education: A systematic literature review. *International Journal of Educational Technology in Higher Education,* 19(1), 8, 1-16. DOI: https://doi.org/10.1186/s41239-021-00312-8 [in English].

4. Bilbao Aiastui, E., Arruti Gómez, A., & Carballedo Morillo, R. (2021). A systematic literature review about the level of digital competences defined by DigCompEdu in higher education. *Aula Abierta.* DOI: https://doi.org/10.17811/rifie.50.4.2021.841-850 [in English].

5. Bogdandy, B., Tamas, J., & Toth, Z. (2020). Digital Transformation in Education during COVID-19: A Case Study. *11th IEEE International Conference on Cognitive Infocommunications (CogInfoCom),* 173-178. DOI: https://doi.org/10.1109/CogInfoCom50765.2020.9237840 [in English].

6. Borova, T., Chekhratova, O., Marchuk, A., Pohorielova, T., & Zakharova, A. (2021). Fostering Students' Responsibility and Learner Autonomy by Using Google Educational Tools. *Revista Romaneasca Pentru Educatie Multidimensionala,* 13(3), 73-94. DOI: https://doi.org/10.18662/rrem/13.3/441 [in English].

7. Çetin, E. (2021). Digital storytelling in teacher education and its effect on the digital literacy of pre-service teachers. *Thinking Skills and Creativity,* 39. DOI: https://doi.org/10.1016/j.tsc.2020.100760 [in English].

8. Chugai, O., & Havrylenko, K. (2024). ChatGPT: Attitudes and Experiences of Technical University Students in Ukraine. *Information Technologies and Learning Tools,* 101(3), 15-27. DOI: https://doi.org/10.33407/itlt.v101i3.5559 [in English].

9. Díaz, J.E.M., Saldaña, C.A.D., & Ávila, C.A.R. (2020). Virtual World as a Resource for Hybrid Education. *International Journal of Emerging Technologies in Learning (iJET),* 15(15), 94-109. DOI: https://doi.org/10.3991/ijet.v15i15.13025 [in English].

10. Händel, M., Stephan, M., Gläser-Zikuda, M., Kopp, B., Bedenlier, S., & Ziegler, A. (2020). Digital readiness and its effects on higher education students' socio-emotional perceptions in the context of the COVID-19 pandemic. *Journal of Research on Technology in Education, 54(2),* 267-280. DOI: https://doi.org/10.1080/15391523.2020.1846147 [in English].

11. Gurevych, R., Kobysia, V., Kobysia, A., Kizim, S., Kutsak, L., & Opushko, N. (2022). Vykorystannia tsyfrovykh servisiv ta instrumentiv u profesiinii pidhotovtsi maibutnikh uchyteliv [Use of Digital Services and Tools in Professional Training of Future Teachers]. *Modern Information Technologies and Innovation Methodologies of Education in Professional Training Methodology Theory Experience Problems,* 64, 5-22. DOI: https://doi.org/10.31652/2412-1142-2022-64-5-22 [in Ukrainian].

12. Hillmayr, D., Ziernwald, L., Reinhold, F., Hofer, S.I., & Reiss, K.M. (2020). The potential of digital tools to enhance mathematics and science learning in secondary schools: A context-specific meta-analysis. *Computers & Education,* 153. DOI: https://doi.org/10.1016/j.compedu.2020.103897 [in English].

13. Hontarenko, I. (2021). Peculiarities in Distance Learning of Foreign Language Using Moodle Platform. *Educational Challenges,* 26(2), 52-62. DOI: https://doi.org/10.34142/2709-7986.2021.26.2.05 [in English].

14. Hrynevych, L., Morze, N., Vember, V., & Boiko, M. (2021). Rol tsyfrovykh tekhnolohii u rozvytku ekosystemy STEM-osvity. [The Role of Digital Technologies in the Development of the Stem Education Ecosystem]. *Information Technologies and Learning Tools,* 83(3), 1-25. DOI: https://doi:10.33407/itlt.v83i3.4461 [in Ukrainian].

15. Ivaniuk, I., & Ovcharuk, O. (2020). The Response of Ukrainian Teachers to Covid-19: Challenges and Needs in the Use of Digital Tools for Distance Learning. *Information Technologies and Learning Tools,* 77(3), 282-291. DOI: https://doi.org/10.33407/itlt.v77i3.3952 [in English].

16. Kniaz, H., & Chukhno, O. (2021). English Trainee Teachers' Perspective on Soft Skills Development in Ukraine. *Arab World English Journal,* 7(1), 299-313. DOI: https://doi.org/10.24093/awej/call7.21 [in English].

17. Kyrpa, A., Stepanenko, O., Zinchenko, V., Datsiuk, T., Karpan, I., & Tilniak, N. (2024). Artificial Intelligence Tools in Teaching Social and Humanitarian Disciplines. *Information Technologies and Learning Tools,* 100(2), 162-179. DOI: https://doi.org/10.33407/itlt.v100i2.5563 [in English].

18. Lancaster, T. (2023). Artificial intelligence, text generation tools and ChatGPT – does digital watermarking offer a solution? *International Journal for Educational Integrity,* 19(1). DOI: https://doi.org/10.1007/s40979-023-00131-6 [in English].

19. Mâţă, L., Cîrtiţă-Buzoianu, C., Cojocariu, V.-M., Mareş, G., & Amălăncei, B.-M. (2024). Students' Perceptions on Online Teaching and Learning in Higher Education. *Revista Romaneasca Pentru Educatie Multidimensionala,* 16(1), 623-644. DOI: https://doi.org/10.18662/rrem/16.1/841 [in English].

20. Pohorielova, T. (2022). Google Classroom as a Tool for Enhancing the Individual Responsibility of the Students under the Conditions of Distance Education. *Pedagogy of the Formation of a Creative Person in Higher and Secondary Schools,* 85, 155-160. DOI: https://doi.org/10.32840/1992-5786.2022.85.26 [in English].

21. Poseletska, K., Kyrychenko, S., Vlasenko, O., Koval, I., Potiuk, I., & Shpenyk, S. (2023). Scenarios for the Use of Chatbots in Teaching a Foreign Language in the Higher Educational Institution (HEI). *Revista Romaneasca Pentru Educatie Multidimensionala,* 15(3), 347-359. DOI: https://doi.org/10.18662/rrem/15.3/770 [in English].

22. Rawas, S. (2024). ChatGPT: Empowering lifelong learning in the digital age of higher education. *Education and Information Technologies,* 29(6), 6895-6908. DOI: https://doi.org/10.1007/s10639-023-12114-8 [in English].

23. Semeniako, Y., Mardarova, I., Lystopad, O., Rybak, O., Samoilenko, V., & Hrechanovska, O. (2024). Strengthening Students' Proficiency in Digital Technologies and the SMART Society. *Revista Romaneasca Pentru Educatie Multidimensionala,* 16(1), 608-622. DOI: https://doi.org/10.18662/rrem/16.1/840 [in English].

24. Sniala, Y. (2023). Zastosuvannia tsyfrovykh instrumentiv u navchanni khimii [Digital Tools Application in Chemistry Teaching]. *Osvita. Innovatyka. Praktyka – Education. Innovation. Practice,* 11(4), 55-64. DOI: https://doi.org/10.31110/2616-650X-vol11i4-008 [in Ukrainian].

25. Tuchina, N., Borysov, V., Podhurska, I., Kupina, I., & Borysenko, N. (2020). Developing Learner Autonomy via Choosing a Person's Educational Pathway. *Revista Romaneasca Pentru Educatie Multidimensionala,* 12(1), 209-225. https://doi.org/10.18662/rrem/210 [in English].

26. Wang, B., & Li, P. (n.d.). Digital creativity in STEM education: The impact of digital tools and pedagogical learning models on the students' creative thinking skills development. *Interactive Learning Environments,* 1-14. DOI: https://doi.org/10.1080/10494820.2022.2155839 [in English].

27. Yanenko, Y. (2024). Zastosuvannia Microsoft Teams v onlain-navchanni studentiv: metodychnyi aspekt [Using Microsoft Teams in Online Learning of Students: Methodical Aspect]. *Information Technologies and Learning Tools,* 100(2), 72-91. DOI: https://doi.org/10.33407/itlt.v100i2.5508 [in Ukrainian].

Received: February 07, 2025
Accepted: March 04, 2025