

DOI: <https://doi.org/10.34069/AI/2024.79.07.7>

How to Cite:

Vynohradova, Y., Dyiak, O., Shevchuk, S., Havryliuk, O., & Hlushchyk, S. (2024). Enhancing language proficiency in non-philological students using interactive online linguistic courses. *Amazonia Investiga*, 13(79), 82-91. <https://doi.org/10.34069/AI/2024.79.07.7>



## Enhancing language proficiency in non-philological students using interactive online linguistic courses

Підвищення рівня володіння мовою у студентів нефілологічних спеціальностей за допомогою інтерактивних лінгвістичних онлайн-курсів

Received: June 4, 2024

Accepted: July 28, 2024

Written by:


Yuliia Vynohradova<sup>1</sup>
 <https://orcid.org/0009-0008-1486-4332>
Olena Dyiak<sup>2</sup>
 <https://orcid.org/0000-0003-2295-9653>
Svitlana Shevchuk<sup>3</sup>
 <https://orcid.org/0009-0006-1817-4633>
Oksana Havryliuk<sup>4</sup>
 <https://orcid.org/0009-0007-1106-5079>
Serhii Hlushchyk<sup>5</sup>
 <https://orcid.org/0000-0002-1706-8322>


### Abstract


The relevance of the research is determined by Ukraine's European integration educational development strategy. This outlined concept of progress highlights the importance of increasing speech competence among higher education learners, including those in non-philological specialities. The article aims to analyse the impact of online courses as an innovative tool for forming speech competence in studying linguistic disciplines by learners of non-philological specialities. The research methods used include online diagnostics of speech competence level, experimental research, assessment of result dynamics, and analysis of the effectiveness of


### Анотація


Актуальність дослідження зумовлена євроінтеграційною стратегією розвитку освіти України. Окреслена концепція прогресу підкреслює важливість підвищення мовленнєвої компетентності здобувачів вищої освіти, зокрема нефілологічних спеціальностей. Мета статті - проаналізувати вплив онлайн-курсів як інноваційного інструменту формування мовленнєвої компетентності при вивченні лінгвістичних дисциплін студентами нефілологічних спеціальностей. Методи дослідження включають онлайн-діагностику рівня сформованості мовленнєвої компетентності,

<sup>1</sup> Candidate of Philological Sciences (PhD), Associate Professor, Department of Culture of the Ukrainian Language, Andrii Malyshko Faculty of Ukrainian Philology and Literary Creativity, Dragomanov Ukrainian State University, Kyiv, Ukraine.  WoS Researcher ID: KYO-9807-2024

<sup>2</sup> Candidate of Philological Sciences (PhD), Associate Professor, Department of Culture of the Ukrainian Language, Andrii Malyshko Faculty of Ukrainian Philology and Literary Creativity, Dragomanov Ukrainian State University, Kyiv, Ukraine.  WoS Researcher ID: KBA-8724-2024

<sup>3</sup> Candidate of Philological Sciences (PhD), Professor, Department Chair, Department of Culture of the Ukrainian Language, Andrii Malyshko Faculty of Ukrainian Philology and Literary Creativity, Dragomanov Ukrainian State University, Kyiv, Ukraine.  WoS Researcher ID: KYO-8781-2024

<sup>4</sup> Candidate of Philological Sciences (PhD), Associate Professor, Department of the Ukrainian Language, Andrii Malyshko Faculty of Ukrainian Philology and Literary Creativity, Dragomanov Ukrainian State University, Kyiv, Ukraine.  WoS Researcher ID: KCY-3884-2024

<sup>5</sup> Candidate of Philological Sciences (PhD), Associate Professor, Department of Culture of the Ukrainian Language, Andrii Malyshko Faculty of Ukrainian Philology and Literary Creativity, Dragomanov Ukrainian State University, Kyiv, Ukraine.  WoS Researcher ID: KYC-4947-2024



interactive online platforms. The research mainly focused on studying the potential of interactive online courses in forming speech competence. It has been proven that using digital educational platforms in educational programmes allows for enforcing the teaching process of linguistic disciplines at a high professional level, stimulating aspects of motivation and effectiveness in forming speech competence. The research determined that implementing innovative approaches in educational programmes allows learners to acquire practical skills through active interaction with various non-standard methods and forms of work. The article demonstrates that innovative methods of teaching linguistic disciplines in educational programmes have the potential to form an effective learning environment, ensuring a significant improvement in the quality of education.

**Keywords:** digitalisation, interactive technologies, educational platform, integration, online courses.

### Introduction

Implementing innovative methods for teaching linguistic disciplines is considered within the concept of improving the effectiveness of mastering these disciplines by learners of non-philological specialties and acquiring practical speaking skills. Active interaction with a wide range of materials, active forms of work, continuous feedback, and non-standard educational tools contribute to a deep understanding of the learning material.

The accumulation of significant amounts of information that needs to be mastered and processed necessitates the introduction of innovative technologies into educational programmes for teaching linguistic disciplines, mainly English. In this regard, one of the fundamental advantages of using interactive online courses is the gradual shift from traditional verbal methods of information transmission to audiovisual ones, which significantly enhances the level of effectiveness in perceiving and assimilating educational material, activates the educational process, stimulates learners' motivation for learning effectiveness, and promotes the formation of stable speech competence skills. Based on the above, studying the potential of interactive online courses as a progressive method of teaching linguistic disciplines in the educational programmes of learners of non-philological specialties is currently considered a priority and relevant scientific direction.

### Research aim

This study aims to analyse the impact of online courses as an innovative tool for forming linguistic competence in studying linguistic disciplines by students of non-philological specialties.

### Research objectives

- To investigate the level of English language competence of non-philological students.
- To implement a pedagogical experiment combining the ascertaining, formative and control stages.
- To introduce elements of educational process optimisation in the context of interactive online courses.
- To experimentally test the effectiveness of the proposed technology.

### Literature Review

The topic of implementing innovative interactive methods for teaching linguistic disciplines in educational programmes of the modern digital era has been reflected in the results of scientific developments by several researchers. In particular, the publications by Bardadym (2022), Haleem et al. (2022), and Kementsev et

експериментальне дослідження, оцінку динаміки результатів, аналіз ефективності інтерактивних онлайн-платформ. У дослідженні основна увага була зосереджена на вивченні потенціалу інтерактивних онлайн-курсів у формуванні мовленнєвої компетентності. Доведено, що використання цифрових освітніх платформ в освітніх програмах дозволяє забезпечити процес викладання лінгвістичних дисциплін на високому професійному рівні, стимулюючи аспекти мотивації та результативності у формуванні мовленнєвої компетентності. У результаті дослідження визначено, що впровадження інноваційних підходів в освітні програми дозволяє студентам набувати практичних навичок через активну взаємодію з різними нестандартними методами та формами роботи.

**Ключові слова:** діджиталізація, інтерактивні технології, освітня платформа, інтеграція, онлайн-курси.

al. (2020) explore the variability of innovative tools for teaching English in a digital environment. Pylypets (2021) and Sharples et al. (2015) analyse the potential of educational platforms within the concept of integration into the global educational environment. Furthermore, Shevtsova & Kozubai (2020) investigate the possibilities of incorporating modern software solutions into English language teaching programmes, while Slukhenska et al. (2022) and Tsepko (2023) study online courses as a prospective pedagogical technology.

Among the scientific developments in the researched field, it is appropriate to highlight the research materials by Snikhovska (2020), Susanty et al. (2021), and Zhao et al. (2021), who see the potential of information systems as the basis for the development of speech competence among learners of non-linguistic specialities. The conceptual horizons of the researched issue are expanded in the works of Alam (2021) and Castro & Tumibay (2021), who pay significant attention to developing an individualised model of the digitalisation process of educational training based on the principles of informative-operational communication, which are sufficiently implemented in interactive online courses.

Acknowledging the importance of the researcher's contributions to the studied topic, the deficit of practical scientific-methodological solutions in the outlined field is worth noting, which requires further active searches.

The study of a foreign language lies in its practical application due to communicative situations, and the main principle of communicative learning is language activity. This is the view of researchers P. Chakraborty et al. (2021). According to the authors, students should learn to solve real and imaginary tasks of joint activity through a foreign language. This approach represents the implementation of such a method of teaching, where systematic, correlated, and orderly learning of a foreign language as a means of communication takes place under conditions of modular language activity in classes. At the same time, the researchers do not specify how, as a result of this approach, the system of English language proficiency is formed, implemented, and operates in the learning process.

Furthermore, A. Demir et al. (2021) attribute a significant role to the principle of novelty in using the communicative approach. According to the researchers, a crucial aspect of this is the development and integration of material that considers different types of perception. Online platforms such as Duolingo, Memrise, and Rosetta Stone allow teachers to create interactive tasks that consider visual, kinaesthetic, and auditory types of perception. For instance, video lessons, game elements, and audio materials can be used for effective learning. However, the scientists do not mention the risks associated with partial or complete digitalisation of the learning process.

There are several gaps in existing scientific studies. In particular, contemporary researchers have not defined or discussed how the mentioned method allows for the systematic monitoring of the improvement of speaking competencies of each listener with the aim of further adequate response and adaptation of educational activities. This study aims to fill existing gaps by analysing how the use of online platforms in the learning process allows for expanding students' access to virtual learning resources, increasing the intensity of learning activities and the level of individualisation.

## Methods

The research methodology involved a case-control approach. For the theoretical study, a representative period was chosen to analyse the directions of practical implementation of online strategies for forming foreign language competence. A representative period of three months was chosen for the experimental part of the research. The study used questionnaires and surveys to assess knowledge, analyse the effectiveness of technological elements, and evaluate the methodology of expert assessments.

Several methods were used in the course of the study, including:

- Online diagnostics of the level of language competence;
- A pedagogical experiment conducted with applicants for non-philological specialities during one academic semester, the control group consisted of 35 students, the experimental group of 37;
- Assessment of the dynamics of results, and analysis of the effectiveness of interactive online platforms.

At the diagnostic (ascertaining) stage of the experimental part of the study, students took specialised tests to determine their English proficiency on platforms such as EnglishDom, British Council, Cambridge Assessment English, Exam English, and EF SET. These tests evaluated four main parameters: grammar, reading, writing, and listening comprehension, allowing for the determination of the average level of speech competence in the concept of the English language. Several of these tests were presented for comparison to accurately determine the level of English proficiency, which ranged from A1 to C1.

Students in the experimental group were offered a series of interactive online courses: Duolingo, LearningApps, and Rosetta Stone. After completing the experiment, students underwent repeated testing to determine their level of English language competence. The results of the dynamic indicators of the effectiveness levels of interactive online courses in the experimental and control groups are presented in graphical form, and appropriate conclusions were made.

The selected duration of the study was three months, as a necessary condition for the success of pedagogical research is its connection with practice. Its specifics are determined by the uneven course of acquiring foreign language competence and the unpredictability of their results. The three-month study is designed to obtain comprehensive data on the dynamics of the development of the pedagogical phenomenon, taking into account the conditions in which it functions. As a rule, pedagogical research results require prolonged verification, as they do not appear immediately. Therefore, three months is the recommended period for implementing significant innovations in pedagogical practice to form conclusions about their effectiveness. The process of selecting and distributing participants into groups was based on the principle of equivalence and random selection. Performance was assessed based on level testing.

Ethical considerations included informed consent regarding the openness of test results from adult participants in the experiment.

The study is limited by time and administrative resources.

## Results and Discussion

Current requirements for the level of training of a modern specialist involve intensifying the quality of speech competence, which is advisable to achieve through the transformation of traditional methodologies, particularly in mastering the English language. Implementing pedagogical technologies for studying linguistic disciplines using online platforms allows for successful results through the potential of resources available on the Internet, which are accessible and easy to use for participants in the learning process.

The study of linguistic disciplines lies in their practical application due to communicative situations, with the main principle of communicative learning being speech activity. The approach proposed by interactive online courses involves implementing a learning method where systematic, correlated, and organised teaching of a foreign language as a means of communication occurs in the context of simulated language activities in classes. As a result of this approach, a system of English language proficiency is formed, implemented, and operational in the learning process. The principle of novelty plays a significant role in using the communicative approach (Yuzkiv et al., 2020).

An important aspect is the development and integration of material that considers different types of learner perception. Online platforms such as Duolingo, Memrise, and Rosetta Stone allow teachers to create interactive tasks that consider visual, kinesthetic, and auditory types of perception, such as video lessons, game elements, and audio materials.

Several effective online platforms can be used for productive English language learning. These include targeted resources with interactive video lessons, audio, and text materials. Notably, platforms like Khan Academy, BBC Learning English, and Quizlet, each with advantages and potential capabilities, allow for a personalised approach to the methodological process that best synergises with individual needs and learning styles for English.

Analysing the list of modern applications, it was found that there are few platforms where students can independently develop learning materials. Such a function can be encountered in LinguaLeo, where users can create their vocabulary with pronunciation. In applications like Duolingo, Busuu, Rosetta Course, Byki, and Polyglot, didactic material is presented in audio and video fragments, flashcards, and texts. The study

material is primarily offered in the form of various exercises. A point accumulation system to progress to the next higher level forms a motivational component of the learning process. Additionally, learners can share their successes and compare their achievements on popular social networks using these platforms.

With the help of the learning apps service, non-philological specialities learners studying English can creatively develop learning exercises with teachers and actively apply them in practical classes, embedding them into their priority web resources. Students can access online learning materials as available educational materials without spatial and temporal restrictions.

Students can perform various tasks through the Duolingo online platform, such as translating texts, using vocabulary, and answering questions. Tracking progress and receiving instant feedback promote active and effective language learning. Learners develop basic writing and sentence construction skills and new vocabulary by engaging in personally chosen time intervals (this could be just 5-10 minutes a day). The Duolingo platform is structured like a tree of achievements. A certain number of points must be earned to advance to a new level. This approach is an effective stimulus for self-improvement and continuing English studies. If desired, the online platform allows students to form groups, allowing them to compare their progress and learning outcomes.

Another example is non-philological speciality learners' use of the Rosetta Stone online platform. This platform is a comprehensive set of mobile applications for one of the most popular interactive English textbooks. The advantage of Rosetta Stone is its unique methodological approach, which enables language acquisition without dictionaries and grammar references more intuitively. Using the microphone, the platform can assess pronunciation accuracy. This approach is considered adequate and engaging, with its standout feature being the simulation of immersion in an English-speaking environment. Rosetta Stone offers a variety of interactive lessons aimed at forming associative links.

A pedagogical experiment was conducted to illustrate the effective use of interactive online courses in the research process. The experiment involved 72 non-philological speciality students. The control group (using a traditional English language teaching programme) consisted of 35 individuals, while the experimental group (using the proposed interactive online course technology) consisted of 37 individuals. The experiment lasted throughout the academic semester of 2023-2024 and included diagnostic, formative, and summarising stages.

At the diagnostic (ascertaining) stage of the experimental part of the study, students took special tests to determine their level of English proficiency. They were assessed based on grammar, reading, writing, and listening parameters, which determined the average level of speech competence in English (Appendix 1).

Resources offered for testing included EnglishDom, British Council, Cambridge Assessment English, Exam English, and EF SET. Students were asked to take several of these tests and compare the results to determine their English level accurately. Proficiency levels ranged from A1 to C1. Results are shown in Table 1.

**Table 1.**  
*English Language Proficiency of Non-philological Specialities Students*

Group	English Language Proficiency	Number of students
<b>Experimental</b>	A1	15
	A2	11
	B1	5
	B2	4
	C1	2
<b>Control</b>	A1	12
	A2	10
	B1	7
	B2	5
	C1	1

Source: compiled by the author

The ascertaining stage of the experiment revealed that the levels of speech competence in English of the experimental and control groups are comparable and require effective adjustment. Three levels were identified: high (B2-C1 levels), intermediate (A2-B1 levels), and beginner (A1 level).

Learners in the experimental group were offered various interactive online courses (Table 2).

**Table 2.**  
*Online Courses Used in the Experimental Study by Applicants of Non-Philological Specialities*

Interactive online platform	Educational process features
<b>LearningApps</b>	Creative development of educational exercises by the learner and their active application in practical lessons, incorporating them into their preferred web resources. Students can access educational materials via the Internet, in the form of available study materials, without spatial or temporal limitations.
<b>Duolingo</b>	Students can track their progress and receive instant feedback, contributing to active and effective language learning. There is the option to choose the time interval personally. The format is presented as a tree of achievements, where advancement to a new level is possible only if a certain number of points are obtained. The online platform provides opportunities for students to be grouped.
<b>Rosetta Stone</b>	It represents a comprehensive set of mobile applications for a popular interactive English language textbook. The platform's advantage is its unique methodological approach to acquiring speaking skills without dictionaries and grammar guides on an intuitive level. Using a microphone, the platform can assess pronunciation accuracy. A distinctive feature is the simulation of immersion in an English-speaking environment. The platform offers a varied set of interactive lessons aimed at forming associative chains.

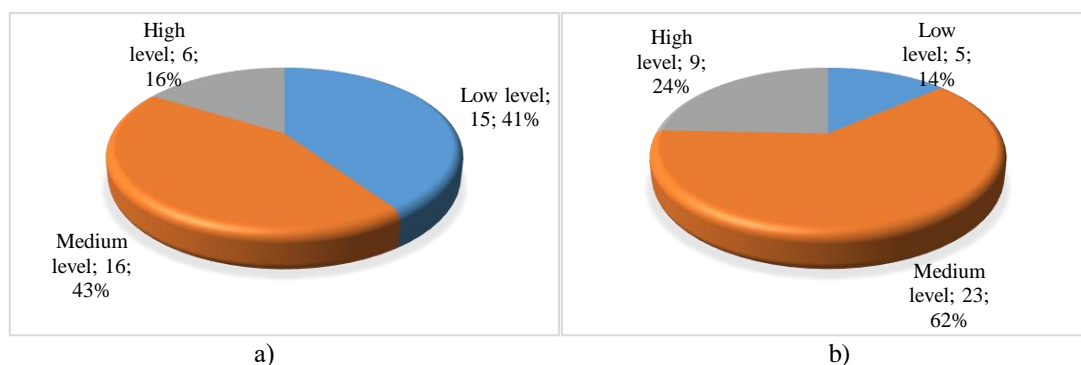
Source: compiled by the author

After completing the experiment, students underwent a retest to determine their level of speech competence in English (Appendix 1). It was found that students in the experimental group showed more significant progress than those in the control group, which used traditional teaching methods. In particular, the intermediate level (A2-B1) indicators of English proficiency increased by 35% in the experimental group, while in the control group, they increased by 12%. At the same time, the indicators of the high level (B2-C1) in the experimental groups increased by 50% and in the control groups by 17% (Table 3). The results of comparing performance level indicators of the use of interactive online courses by the experimental and control groups are shown in Figures 1 and 2.

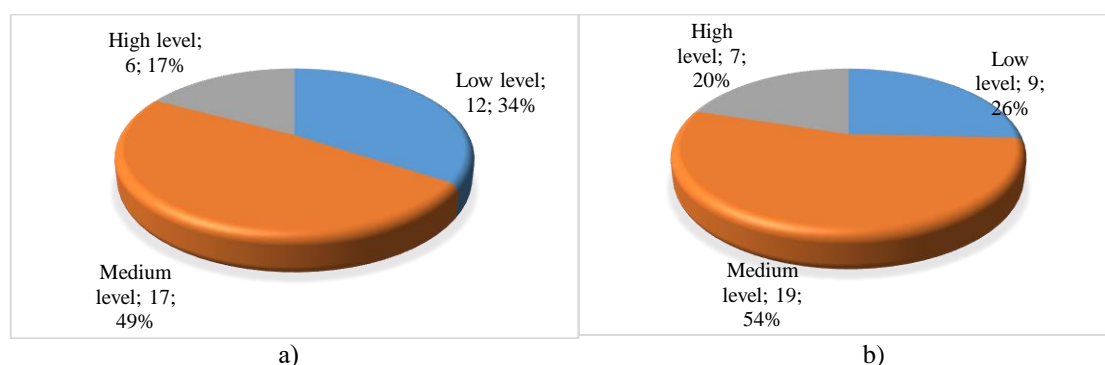
**Table 3.**  
*English Language Proficiency of Non-philological Specialities Students*

Group	English Language Proficiency	Number of students
<b>Experimental</b>	A1	5
	A2	15
	B1	8
	B2	7
	C1	2
<b>Control</b>	A1	9
	A2	10
	B1	9
	B2	6
	C1	1

Source: compiled by the author



**Figure 1.** Dynamics of English Language Proficiency in the Experimental Group: a) before the experiment; b) after the experiment, number of students  
Source: author's modelling.



**Figure 2.** Dynamics of English Language Proficiency in the Control Group: a) before the experiment; b) after the experiment, number of students  
Source: author's modelling

The control phase of the experiment evaluated the effectiveness of the proposed elements of interactive educational tools in studying linguistic disciplines by learners of non-philological specialities, indicating the feasibility of further research in the outlined direction.

**Table 4.**

*Levels of Speech Competence according to the European Language Assessment System (CEFR or CEF), which was used for diagnostics of non-philological students*

Level	Grammar	Reading	Writing	Listening
A1	Students distinguish between plural and singular, know Present Simple, Past Simple, and Future Simple, and can ask simple questions.	He/she reads short sentences (up to 9 words) with simple vocabulary.	He/she can write first name, surname, date of birth, city, and age.	He/she comprehends short sentences (up to 9 words) spoken slowly and with clear articulation.
A2	Students know the Present Continuous and Past Continuous tenses.	He/she reads short texts (up to 300-400 words) on simple topics.	He/she can write short notes or stories but with a dictionary.	He/she comprehends simple dialogues and stories about everyday life.
B1	Students know modal verbs, conditional clauses, gerunds, infinitives, the Present Perfect, Present Perfect Continuous, and degrees of comparison of adjectives.	He/she reads texts of different types and styles despite 10-15% of unfamiliar words.	He/she can write a personal or business letter or a short story (up to 20 sentences) without using a dictionary.	He/she comprehends the story's plot and the character's feelings and actions and can guess specific vocabulary from the context.
B2	Students know the features of all conditional clauses, modal verbs, gerunds,	He/she reads both thematic professional reports and non-adapted fiction texts	He/she writes texts with a lot of details and examples on various topics	He/she listens almost fluently to texts - from fiction stories to

	infinitives, and all tense forms.	without a dictionary and with a complete understanding of the content.		interviews and reports.
<b>C1</b>	Students use inversion, the causative form of the verb, and the tenses required for narration.	He/she reads unadapted texts, understands their essence, and can work with analytical reports and scientific materials.	He/she can write a wide variety of texts using artistic techniques.	He/she perceives standard English and speech with different accents and peculiarities.

According to modern researchers Abuhassna et al. (2020), Adıgüzel et al. (2023), and Vassilakopoulou & Hustad (2023), a significant advantage of digital educational platforms is that learners of non-linguistic specialities studying English through online courses have the opportunity to check their level by completing tests and assignments on various topics. In addition, they can independently search for additional lexical or grammatical material due to their difficulty level and individual needs. Researchers believe that such an individualised approach increases motivation and learning effectiveness.

As evidenced by the scientific developments of Kit et al. (2023), Naumenko (2018), and Povoroznyuk et al. (2022), the correct application of the potential of online platforms significantly enriches English language learning in terms of didactic possibilities, particularly in the listening and speaking sectors. Researchers argue that by using modern targeted online platforms, one can listen to audio recordings or watch videos at an individually comfortable pace, corresponding to the general level of language skills in the foreign language. According to scientists, a significant advantage is the ability to listen to parts of the text that cause difficulties an unlimited number of times.

Scientists Bodnar et al. (2023), Burbules et al. (2020), and Szymkowiak et al. (2021) emphasise that social media in the presented concept can be considered a creative space for learners of English language competence. They represent platforms where students freely interact, showcase their talents, and seek mutual support in mastering English. Thanks to the wide variety of platform choices, learners use social media to discuss projects, intensifying the effectiveness of lessons and consolidating acquired skills. Given the rapid growth in social media platforms, the variations in the delivery methods of educational materials have increased, allowing students to effectively learn English in their space and time, with complete personal control over the learning process.

The authors Cherchata (2023) and Dovzhenko & Dyachuk (2021) emphasise that using online platforms in the learning process allows for expanding access to resources in the virtual learning space, increasing educational activities' intensity and enhancing individualisation. The method of online courses also allows for systematic monitoring of the improvement of the language competencies of each listener with the aim of further adequate response and adaptation of the course's educational activities, which, according to scientists, is an additional advantage of interactive learning.

The practical and theoretical significance of the research results is manifested in filling the gaps in existing scientific developments on the given topic. The results highlight the need to develop and implement optimised online foreign language learning strategies, emphasising the importance of self-education skills and restoring a positive attitude towards the digitalisation of education. In particular, the results of the current study demonstrate that online technologies contribute to the development of cognitive abilities and active interaction skills, communicative foreign language competence, and the formation of social activity. Interactive technologies help to implement the acquired skills and abilities in various fields.

These conclusions partially contradict the general deductions of scientists in the field of the researched issue. They mainly consider online courses in linguistics to be additional and insignificant. Meanwhile, this article argues for the opposite functionality of the proposed methods. When the potential of online platforms is correctly applied, lessons in linguistic disciplines are significantly enriched regarding didactic possibilities, particularly in the listening and speaking sectors. Using modern targeted online platforms, students can listen to audio recordings or watch videos at an individual comfortable pace corresponding to their general language skills. A significant advantage is the ability to listen to parts of the text that cause difficulties an unlimited number of times. Some variations of applications allow for initial testing, based on which the online platform offers individual recommendations that help to start learning effectively from the necessary level.



The study is limited by the complexity of implementing experimental verification of theoretical conclusions, which requires significant time and administrative resources.

## Conclusion

Based on the research, innovative approaches to teaching English within educational programmes in the digital age form the basis for the promising development of pedagogy and language education. Leveraging the potential of interactive platforms, online resources, mobile applications, and other digital tools can significantly optimise learners' motivation, develop communication skills, and facilitate effective and intensive mastery of linguistic disciplines.

Thanks to digital technologies, new opportunities are emerging for individualising the educational process and improving the quality of education while mastering linguistic disciplines. Using innovative educational approaches, methods, and tools helps acquire the main concepts of synergy between speech and communication competence, skills for independently acquiring new knowledge, and developing personal creative potential.

As a result of the analysis within the research, the effectiveness of implementing promising directions for developing and improving the speech competence of non-linguistic speciality learners was examined, particularly the use of online courses for learning foreign languages. After implementing the proposed elements into the educational process at the control stage of the pedagogical experiment, it was found that the intermediate level of English language competence indicators increased by 35% in the experimental group and by 12% in the control group. Meanwhile, the high-level indicators in the experimental groups increased by 50% and in the control groups by 17%.

The results obtained in the study can be applied to improve the process of teaching English and to develop effective educational programmes in the modern digital age. The prospect of further research is seen in developing methods for improving digital tools for teaching English and studying the impact of digital technologies on the development of language skills in learners.

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