Original Article

Digital technologies and artificial intelligence for multicultural competence in high school literature

Tecnologías digitales e inteligencia artificial para la competencia multicultural en literatura de secundaria

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Abstract

The development of skills to effectively interact, adapt, and maintain relationships in a diverse socio-cultural environment is becoming particularly relevant in the education system. The aim of the research was to study the possibilities of building students' multicultural competence in literature lessons using digital technologies. The study used empirical methods such as experiment, observation, evaluation and questionnaire. During the experiment, services for creating text, visual and video content based on artificial intelligence were used, in particular: OpenAI, MidJourney, Synthesia, DeepAI, Runway ML. Student collaboration, discussions and debates were implemented using Google Teams, Telegram and Zoom services. Assessment was carried out using a mobile application developed on the SkillzRun platform. The concept of the online Foreign Literature course was elaborated to develop multicultural competence in secondary school students in a digital environment. An educational experiment was conducted with the participation of 130 students of 10 grades aged 15-16 years of secondary schools of Ukraine. The level of development of multicultural competence in students of the control group (CG) and experimental group (EG) was assessed after the educational experiment. The testing results showed that digital technologies enable students to expand their perception of literary works and motivate them to carry out more detailed analysis. This, in turn, contributes to active interaction with texts, the development of cultural intelligence, and the intercultural communication skills. The level of knowledge in the subject showed that students who participated in the educational experiment had higher scores. They scored 9.1 points on average, while the CG students scored 7.8 points only. The study confirmed that studying foreign literature through IT technologies enhances students' interest in the cultural diversity of the peoples of the world, develops cultural sensitivity, and stimulates the practice of key multicultural skills. Prospects for further research will be creating a universal pedagogical model for the development of multicultural competencies for secondary school students with an orientation to the cognitive, value-motivational, emotional and behavioral components. Special attention will be paid to the development of effective pedagogical approaches to the integration of cultural diversity into the educational space.

Keywords: artificial intelligence, digital environment, interactive learning, intercultural interaction, multicultural education.

Resumen

El desarrollo de competencias para interactuar, adaptarse y mantener relaciones eficaces en un entorno sociocultural diverso está adquiriendo una importancia particular en el sistema educativo. El objetivo de la investigación era estudiar las posibilidades de construir la competencia multicultural de los estudiantes en las clases de literatura utilizando tecnologías digitales. El estudio empírico empírico utilizó métodos como la experimentación, la observación, la evaluación y el cuestionario. Durante el experimento, se emplearon servicios de creación de contenido textual, visual y de vídeo basados en inteligencia artificial, en particular:

OpenAI, MidJourney, Synthesia, DeepAI y Runway ML. La colaboración, las discusiones y los debates estudiantiles se implementaron mediante Google Teams, Telegram y Zoom. La evaluación se realizó mediante una aplicación móvil desarrollada en la plataforma SkillzRun. El concepto del curso en línea de literatura extranjera se elaboró para desarrollar la competencia multicultural en los estudiantes de secundaria en un entorno digital. Se llevó a cabo un experimento educativo con la participación de 130 estudiantes de 10 grados de 15-16 años de las escuelas secundarias de Ucrania. Se evaluó el nivel de desarrollo de la competencia multicultural en los alumnos del grupo control (GC) y del grupo experimental (GE) después del experimento educativo. Los resultados de las pruebas mostraron que las tecnologías digitales permiten a los estudiantes ampliar su percepción de las obras literarias y motivarlos para llevar a cabo un análisis más detallado. Esto, a su vez, contribuye a la interacción activa con los textos, el desarrollo de la inteligencia cultural y las habilidades de comunicación intercultural. El nivel de conocimiento en la asignatura mostró que los estudiantes que participaron en el experimento educativo tenían puntajes más altos. En promedio, obtuvieron 9,1 puntos, mientras que los estudiantes de GC obtuvieron solo 7,8 puntos. El estudio confirmó que el estudio de la literatura extranjera a través de las tecnologías de la información aumenta el interés de los estudiantes por la diversidad cultural de los pueblos del mundo, desarrolla la sensibilidad cultural y estimula la práctica de competencias multiculturales clave. Las perspectivas de investigación futuras serán la creación de un modelo pedagógico universal para el desarrollo de competencias multiculturales en estudiantes de secundaria, con énfasis en los componentes cognitivos, motivacionales, emocionales y conductuales. Se prestará especial atención al desarrollo de enfoques pedagógicos eficaces para la integración de la diversidad cultural en el ámbito educativo.

Palabras clave: aprendizaje interactivo, educación multicultural, entorno digital, inteligencia artificial, interacción intercultural.

Introduction

In an era of increasing cultural interconnectedness, multicultural competence is a valuable resource for shaping intercultural interaction, professional and personal self-realization. The challenges and prospects of global multiculturalism increase the need to integrate targeted socio-cultural educational practices into the school learning environment. The integration of literary learning and intercultural education opens the way to the formation of socio-cultural awareness of students, promoting adaptability in international contexts and competence in intercultural communications.

The development of students' integrated sociocultural awareness is based on two key competencies: cultural empathy and cognitive awareness of cultural diversity. In the study of Roza & Guimarães (2022), a clear relationship between literary reading and the development of empathy in children and adolescents is outlined. The authors argue that literary interventions can qualitatively influence the development of empathic competencies, cognitive functions and emotional intelligence. According to Qi & You (2025), the emotional integration of foreign narratives in the process of reading foreign literature promotes a personal connection with the multicultural context and strengthens cultural empathy. The authors emphasize that foreign literature is an influential tool for the development of intercultural empathy, opening up the experience of diverse cultural perspectives. Davis (2020) notes that the cultural component plays an important role in the formation of intercultural competence. Milovanović (2025) argues that cultural empathy should be considered as a culturally mediated phenomenon, formed through symbolic interaction, integration into social communicative practices. In his opinion, empathy forms the basis of emotional literacy, social responsibility and intercultural understanding. This

statement is supported by Finkelstein & Soffer-Vital (2025) noting that cultural empathy, which involves a tolerant attitude, understanding and respect for diverse points of view, is critically important for cooperation and effective communication in a multicultural environment.

Cultural empathy and cognitive awareness of cultural diversity are manifestations of intercultural competence. Bakum et al. (2022), considers multicultural competence through the prism of four interconnected and interdependent components: linguistic, sociocultural, functional and emotional-axiological. According to Urgun, et al. (2025) intercultural competence should be considered as a set of personal characteristics - intercultural traits, intercultural abilities and intercultural attitudes and worldviews. According to Kremer & Pinto (2025), along with the main components of intercultural competence, such as cultural sensitivity, empathy, awareness and adaptability, social integration and communication skills play an important role. According to the authors, the ability to participate in sociocultural interaction, critically evaluate cultural contexts and adapt to sociocultural realities form the functional basis of multicultural competence. According to Pintor & Premazzi (2024), Sarwari et al. (2024) adaptability in communication and tolerant attitude towards different cultures are manifestations of the formation of intercultural competence. According to Hamaniuk et al. (2024), intercultural competence involves the ability to adapt, form mutual understanding and effective interaction with representatives of other cultures in a diverse socio-cultural environment. Chyzhykova et al. (2022) identifies the professional context of intercultural competence, which reflects the ability of an individual to form effective business relationships in a multinational environment. According to the authors of the study, multicultural competence includes knowledge and understanding of different cultural characteristics, the ability to interact with representatives of different cultures. The ability to be sensitive, tolerant and flexible in interaction with different cultural contexts, as well as to adapt one's personal perception to the national values of other cultures is extremely important. The development of multicultural competencies of students in high school, stimulating the development of cultural empathy, intercultural tolerance and respect in the process of literary learning achieves progress provided that it is structured and modern teaching methods are implemented. Our statement is supported by to Qi & You (2025), who believe that the use of blended learning methods in literature lessons with the use of modern digital technologies improves empathic understanding and critical thinking in students.

In the context of globalization and digital transformation, intercultural interaction urges the issues of developing multicultural competence in educational contexts. The issues of creating conditions favourable for the development of multicultural competence in the educational environment are being studied by educators and researchers. Academic research mainly focuses on the instrumental, methodological and technological characteristics of digital pedagogical solutions, ignoring their impact on the development of multicultural competence in the process of educational activity. The hypothesis of this study is that the use of digital technologies in foreign literature lessons has a positive effect on the development of key elements of multicultural competence. In particular, this applies to the textual, interpretative, communicative, aesthetic, value and content, cultural, creative, and adaptive components. The academic novelty of the study is the identified and substantiated pedagogical ways of developing multicultural competence in secondary school students studying literary subjects. A pedagogical strategy for the development of multicultural competence using digital technologies is proposed, taking into account the synergy of individual and collective teaching methods.

The aim of this research was to study the possibilities of building students' multicultural competence in literature lessons using digital technologies. The aim was achieved through the fulfilment of the following research objectives:

− Create a concept for an online educational Foreign Literature course aimed at the development of multicultural competence and model a digital learning environment for high-quality students' interaction in the process of studying the subject;
− Conduct an educational experiment with the participation of 10th grade students of secondary schools of Ukraine;
− Assess the level of development of multicultural competence in the CG and EG students after the educational experiment;
− Conduct students' survey and determine their attitude to the possibilities of developing the necessary competencies for high-quality socio-cultural interaction in the global digital space;
− Assess students' attitude to collective and individualized educational strategies of digital learning and digital teaching methods.

Literature Review

Modern school education is experiencing a dynamic era of transformations caused by the convergence of advanced technologies and innovative teaching methods. Modern digital technologies open up opportunities for improving educational scenarios through management, analytics and personalization functions (Ellikkal & Rajamohan, 2024), gamification and simulation (Gautam & Dua, 2021). According to Schön et al. (2023), the introduction of modern digital services based on artificial intelligence (AI) into educational interactions allows to improve the quality and efficiency of learning. Nguyen, et al., (2022) note the impact of AI on changing approaches to learning towards personalization and adaptability. And Archibald et al. (2023) note the prospects of AI in improving the assessment and moderation of the educational process. Dynamic planning of personalized learning paths using adaptive AI-based systems (Li, et al., 2024) transforms approaches to learning and the educational environment, making it adapted to the needs of students. According to Chovriy et al. (2024), the generative functions of modern digital technologies can increase student engagement by modeling an interactive learning environment with gamification elements. Möller et al. (2024) emphasize that the integration of digital technologies into educational contexts can significantly increase student success. Kocot et al. (2024) note that the potential of digital integration can be revealed under the condition of technological support, the quality of educational content, and the ability of students to learn independently. According to the authors of this study, the integration of modern digital tools into students' educational scenarios allows diversifying and improving the learning experience, creating an environment of high-quality interaction, and realizing the potential of innovative teaching methods. The integration of AI into educational practices allows for increased motivation and increased knowledge acquisition by diversifying the learning load, diversifying it, and modernizing educational content.

Digital technologies expand the possibilities of studying literature by allowing students to delve deeper into the cultural component of the world's literary heritage. Interaction with literary cultural content in a digital environment reveals the research potential of students, which includes the ability to analyze, evaluate, argue and identify key features inherent in a particular culture. According to Alfaruque, et al. (2023), digital technologies have transformed traditional approaches to studying literature. Multimedia visualizations, electronic editions of

classic works, video storytelling, graphic adaptations, interactive hypertexts and remote reading platforms expand interpretive possibilities. Modern digital tools allow you to model the structure of the text, create digital artifacts and maps of artistic space, visualize thematic lines and deepen the analytical perception of a literary work. According to Guo (2025), digital tools will enrich students' learning experience, positively affect students' motivation and understanding of complex literary concepts. Daghamin & Daghamin (2025) argue that the integration of digital technologies based on artificial intelligence into literary teaching allows students to personalize their approach to systematic work with literary topics, create their own unique methods of reading and analyzing literature, and improve the comparative analysis of different literary works. According to the authors of this study, the study of literature in a digital educational environment contributes to the development of cultural empathy, integrating the student's attention into cultural literary content and stimulating cognitive research interest. The generative functions of digital technologies have powerful potential for modelling an engaging learning environment with elements of gamification and interactivity.

Given the trends of digital transformation in education, strategies for implementing digital tools in educational interactions require in-depth research. Despite the significant contribution of researchers to the study of the possibilities of digital technologies in educational contexts, some aspects remain poorly covered. In particular, we are talking about the possibilities, advantages and disadvantages of using digital tools in the study of the humanities. Furthermore, the issue of developing global multicultural competencies in a digital environment within the framework of secondary education curricula requires additional research.

Methodology

Research stages

The research was conducted from January to May 2025. The stages of the research are presented in Figure 1.

Sampling

The educational experiment involved 130 10th grade students aged 15-16 from secondary schools in Ukraine. An official invitation was sent to the directorates of 27 schools with a proposal to participate in the study. The aim of the appeal was to involve 10th grade students in an educational experiment, survey and exchange of experience on the appropriateness of using digital technologies in literature lessons. It was also intended to study the impact of these technologies on the development of key elements of multicultural competence. Involvement in the experiment was voluntary. An online registration form was developed for students to participate in the study, which was a tool for collecting basic data about the participants. The form provided for information about the educational institution, grade, age, as well as consent to participate in the study. As of the beginning of January 2025, 167 applications from students to participate in the study were received. The initial analysis of the questionnaire data and the participants' compliance with the research criteria was followed by a screening, during which some of the applications were rejected. The main sample included 130 participants who met the established requirements and expressed their willingness to actively participate in all stages of the experiment. The main inclusion criteria were age 15-16 years and studying in the 10th grade of secondary schools in Ukraine.

Two groups of participants were randomly formed to ensure the objectivity of the

research results: the EG and the CG. For 4 months, the EG students (65 students) participated in the educational experiment. The experiment was based on the author's model of developing multicultural competence in secondary school students using modern digital tools in the Foreign Literature. The CG participants studied using the traditional method according to the curriculum. The educational online Foreign Literature course was developed and the educational experiment was conducted by 6 teachers of the Ferenc Rakoczi II Transcarpathian Hungarian College of Higher Education and Borys Grinchenko Kyiv Metropolitan University.
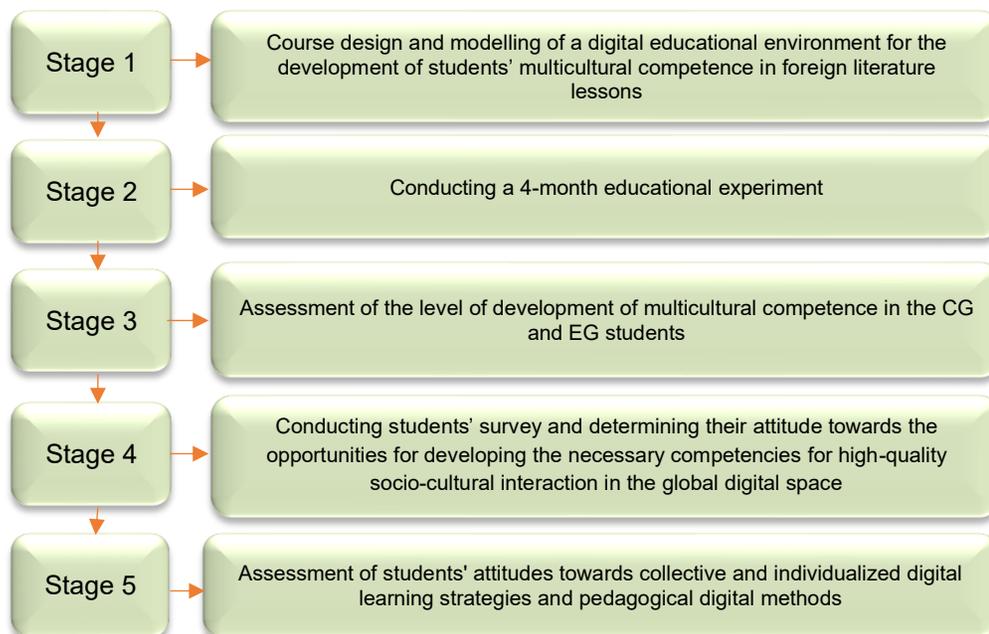
Stage 1	Course design and modelling of a digital educational environment for the development of students' multicultural competence in foreign literature lessons
Stage 2	Conducting a 4-month educational experiment
Stage 3	Assessment of the level of development of multicultural competence in the CG and EG students
Stage 4	Conducting students' survey and determining their attitude towards the opportunities for developing the necessary competencies for high-quality socio-cultural interaction in the global digital space
Stage 5	Assessment of students' attitudes towards collective and individualized digital learning strategies and pedagogical digital methods

Figure 1. Research stages
Source: developed by the authors

Methods

– The experimental method was applied in the process of modelling the educational digital environment and the structure of the online Foreign Literature course, as well as during the experimental training of students in the course. The experiment involved individual and group learning. Students were involved in various activities in a digital environment, including communicative games, group discussions, seminars, virtual tours and excursions, and digital creativity using services for creating text, visual, and video content based on artificial intelligence;
– The observation method was used to record the activity and involvement of students in the learning process;
– The assessment method was used to assess the level of development of multicultural competence in the CG and EG students after the educational experiment. The testing included 10 situational tasks for assessing each element of multicultural competence, in particular: textual interpretative, communicative, aesthetic, value and content, cultural, creative, adaptive competencies. The assessment was carried out on a 12-point system
– The survey method was used to: 1) assess students' attitudes towards opportunities to develop the necessary competencies for high-quality socio-cultural interaction in the global digital space; 2) assess students' attitudes

towards collective and individualized learning strategies for digital learning and pedagogical digital methods. It was carried out by means of a questionnaire. The questionnaire contained 3 blocks of 10 statements, with which respondents could assess their position on a Likert scale from 1 to 5 points. The first block of statements was aimed at assessing students' attitudes towards opportunities to develop the necessary competencies for high-quality socio-cultural interaction in the global digital space. The second block was aimed at assessing students' attitudes towards collective and individualized learning strategies for digital learning. The third block was aimed at assessing students' attitudes towards digital teaching methods. The questionnaire was developed by the authors of the study independently based on an analysis of academic literature, taking into account the aim and objectives of the study. It was tested through a pilot survey (n = 40) with a second survey after two weeks. The results of the t-test: $t(29) = -0.62$, $p = 0.542$, indicating the stability of the responses. Cronbach's $\alpha = 0.81$ confirmed high internal consistency. The questionnaire demonstrated sufficient reliability and was used as the main tool for collecting empirical data in further research.

- The analytical method was used to structure the survey results, draw conclusions and recommendations to improve the effectiveness of developing students' multicultural competence in the Foreign Literature lessons using digital technologies.

Instruments

1. Individual learning strategies for the Foreign Literature subject for the EG students were implemented and the knowledge and level of multicultural competence of all participants was tested using a mobile application. This application was developed on the SkillzRun platform.
2. Students' joint work on the study of cultural features of literary works was carried out using the Google Teams service and the Google Teams communication service;
3. In working on creative projects, students used services for creating text, visual and video content based on AI, in particular: OpenAI, MidJourney, Synthesia, DeepAI, Runway ML.
4. Group discussions and exchange of experience were carried out in the educational experiment community on Telegram;
5. Coordination meetings with course moderators were carried out in Zoom.
6. The obtained data were analysed and processed using Microsoft Excel.

Results and Discussion

The educational experiment proved that studying literature in the modern digital space enables students to acquire the knowledge, skills and practical qualities necessary for high-quality interaction with the international environment. Communication games, seminars, virtual reviews and excursions, as well as visual generation of literary images had a positive impact on the level of students' multicultural competence. Interaction with educational video content created using AI contributed to the development of analytical and creative skills. In addition, joint work on projects and conducting group research also made a significant contribution to improving intercultural interaction among students. The assessment results showed that the EG students demonstrated a higher level of development of elements of multicultural competence than the CG students (Figure 2).
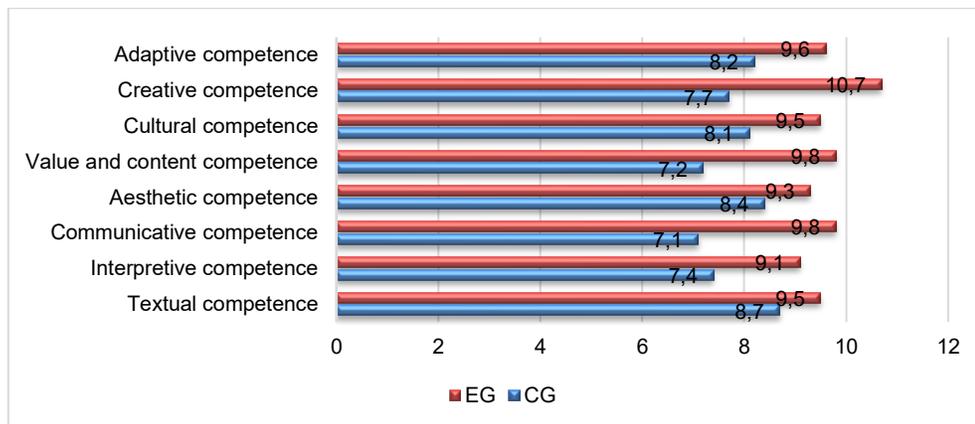
Figure 2. Assessment of the level of development of multicultural competence
Source: created by the authors

The analysis of the test results proved that digital technologies enable students to expand their perception of literary works. They motivate students to more detailed analysis and active interaction with texts, which contributes to the development of their cultural intelligence and intercultural communication skills. In addition, the results of testing the level of knowledge in the Foreign Literature showed that students who participated in the educational experiment had higher scores. Their scores were 9.1 on average, while this indicator was 7.8 for the CG students. The implemented pedagogical methods, which involved group learning in a simulated digital environment, have proven their effectiveness in the context of developing multicultural competence. The results of the student survey showed that digital technologies are able to improve the quality and efficiency of the educational process. They contribute to the development not only of key elements of multicultural competence, but also of skills for high-quality socio-cultural interaction in the global digital space. The results of the student survey are presented in Table 1.

Table 1.
Students' attitudes towards opportunities to develop the necessary competencies for high-quality socio-cultural interaction in the global digital space

Statement	Rating scale				
Interaction with digital technologies in literature lessons contributed to:	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
development of digital literacy			2%	3%	95%
development of information literacy and analytical skills		1%	2%	4%	93%
development of responsibility, diligence and the ability to prioritize		2%	5%	6%	87%
development of practical literary knowledge and skills			2%	7%	91%
development of critical thinking, problem-solving and decision-making skills		1%	2%	4%	83%
development of flexibility of thinking, the ability to quickly perceive information	5%	7%	6%	4%	78%
development of communication skills, cooperation and collaboration skills in the digital environment	4%	8%	6%	7%	75%

development of the ability to analyse information, check facts, identify false arguments	4%	5%	4%	6%	81%
development of critical and creative thinking	3%	5%	7%	9%	76%
development of adaptability to different cultural contexts			4%	10%	86%

Source: created by the authors

The results of the student survey allowed for a comprehensive assessment of their attitudes towards the opportunities for developing multicultural competencies in the digital information space. In general, students confirmed the value of learning experience in a digital environment and its positive impact on the development of multicultural competence, noting its flexibility, accessibility and comfort. The next stage of the research was to study students' preferences in choosing learning strategies, in particular individual and collective. Table 2 presents the results of the survey.

Table 2.
Students' attitudes towards collective and individualized digital learning strategies

Statement	Rating scale				
	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
Individualized tasks and approaches to learning contribute to better assimilation of literary material		9%	15%	12%	64%
A learning process adapted to the student's level of knowledge, needs and expectations contributes to the effectiveness of learning		6%	11%	8%	75%
Individualized learning strategies enable better planning one's own time and pace of learning	4%	10%	7%	8%	71%
Individual distance consultations with a teacher help to understand and assimilate the material more deeply			3%	12%	85%
Collective learning interactions have a noticeable impact on learning and the development of multicultural competencies			1%	3%	96%
Group learning contributes to faster and more qualitative assimilation of material				6%	94%
Joint work on projects increases the effectiveness of learning				9%	91%
A collective approach to learning creates an effective learning environment, enabling an exchange of ideas, learning from others, and creating an atmosphere of mutual support			1%	2%	97%
Group learning contributes to the comfortable and convenient development of multicultural competence				2%	98%

Source: created by the authors

The survey results clearly identified the students' educational preferences, which were largely oriented towards collective learning strategies. However, observation

of the participants in the educational experiment showed that the use of the capabilities of modern adaptive digital technologies in the educational process can qualitatively increase the effectiveness of collective learning interactions. This also contributes to the consolidation of knowledge and skills. Therefore, the combination of collective and individualized learning strategies aimed at the development of multicultural competencies is the optimal solution in the creation and design of educational scenarios. Furthermore, the students' attitude to online learning methods and their potential in increasing educational self-efficacy, engagement and motivation was studied. The survey results are presented in Table 3.

Table 3.
Students' attitudes towards pedagogical digital methods and approaches

Statement	Rating scale				
	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
Personalized tasks and recommendations based on the analysis of student success make learning more focused and motivating		3%	7%	6%	84%
The use of interactive digital materials helps to increase interest in learning and better assimilation of the material			2%	7%	91%
Mobile and online platforms that offer access to educational materials at any time enable effective organization of learning			7%	6%	87%
The use of game elements (gamification) in learning stimulates more active participation in the learning process				4%	96%
Group classes and discussion of educational materials with other students in an online format engages in learning and helps improve learning outcomes			1%	2%	97%
Interactive situational tasks make the learning process more exciting			2%	3%	95%

Source: created by the authors

The survey results showed that modern educational technologies open up new opportunities for the development of relevant multicultural skills in secondary school students. At the same time, they provide a high level of educational motivation and engagement. The results of this study confirmed that the study of foreign literature in the environment of the latest IT technologies enhances students' interest in the cultural diversity of the peoples of the world. It also develops cultural sensitivity and stimulates the practice of key multicultural skills.

One of the priorities of literature education is to develop students' ability to independently analyze and interpret literary texts. It is also important that students are aware of and understand the aesthetic, spiritual, and moral values embedded in these texts. The results of a study by Guo (2025) confirmed that the integration of digital tools into literature courses significantly increases student engagement, participation, and understanding, and improves academic performance and critical thinking. The results of the study by Daghamin & Daghamin (2025) confirmed that the use of artificial intelligence in the process of analyzing a literary work helps students interpret and critically analyze literature, supporting authentic literary interpretation.

This study demonstrated that group discussions of literary works, as well as the joint creation of video content aimed at identifying cultural differences, allowed students

to develop cultural knowledge. The results of a study by Urgun et al. (2025), proved the effectiveness of blended learning methods and their impact on the development of students' intercultural competence in the process of implementing intercultural curricula. This is consistent with our opinion, since we believe that participation in collaborative learning in an online environment and interaction with artificial intelligence services for creating digital content are important factors. Developing interest in cultural diversity through active learning and project work with literary texts affects the increase in the level of multicultural competence of students. This opinion is confirmed by the results of Yamada (2025), who proves that digital sources, online communication and interaction play a mediating role between the influence that stimulates learning and the skills that students acquire and apply in further learning.

The results of the study by Sarwari et al. (2024) confirmed that an international educational environment, access to online resources and activities are important components of the learning process. This study presented an educational experiment involving Ukrainian students only. The results of the study showed that the development of students' multicultural competencies remains possible even in the absence of opportunities to implement educational practices in an international educational environment. This is achieved by modelling the educational environment using digital technologies, in particular AI services. As Konstantinidou & Nisiforou (2022) noted, the educational content should be authentic and the learning process should be interactive, multimodal, and attractive.

Another problem in curricula focused on building multicultural competencies is the implementation of an objective assessment of the level of their development in students at different stages of learning. In this study, the level of development of multicultural competence were tested through 10 situational tasks to assess each element of multicultural competence. The assessment was carried out in a mobile application, in an easy and comfortable form for students. The hypothesis of the study was confirmed: the use of digital technologies in foreign literature lessons does have a positive impact on the development of key elements of students' multicultural competence. The results of this study can be used by teachers when designing a learning environment that will promote the development of multicultural competence. The combination of collective and individual learning strategies outlined in the study will enable easy and comfortable realization of students' learning goals.

Limitations

The main limitations of this study are the narrow geographical scope of the educational experiment, as it was conducted among secondary school students in Ukraine. Besides, this is the limited age range of participants (10th grade students aged 15-16) and the short duration of the experiment (4 months).

Recommendations

The results of this study give grounds to outline recommendations for increasing the effectiveness of building students' multicultural competence of in the Foreign Literature lessons using digital technologies, in particular:

- It is necessary to ensure the synergy of individual and group methods of online learning;
- Interactive interactions must be directed towards the development of key elements of multicultural competence;

- It is necessary to integrate modern digital services and tools into educational interactions and direct students by providing instructions for their active use when working on literary works;
- Increasing the effectiveness of the training course requires the application of pedagogical methods of active project-based problem-oriented learning;
- It is important to coordinate the development directions of both subject and multicultural competencies when modelling educational scenarios for group online learning, so that the trajectories of their development complement and reinforce each other, and do not exclude or displace each other;
- It is necessary to provide additional information and consultation, technological support and ways of direct online communication with students' parents/guardians.

Conclusions

The results of the study confirmed that the literary context plays an important role in the development of multicultural competencies, revealing the values and worldviews of different cultures through language and artistic works. The results of the educational experiment confirmed that the modern use of digital technologies and artificial intelligence in literature lessons with the implementation of individual and group learning strategies has a significant impact on the development of multicultural competence of students. Digital tools based on artificial intelligence provide flexibility and speed of learning, and also contribute to a deeper assimilation of materials, the development of key elements of multicultural competence. Digital technologies contribute to active interaction with literature and culture, developing cultural intelligence and intercultural communication skills.

The results of this study can be used by educators at the stage of designing educational scenarios aimed at the development of multicultural competences in a digital environment. The combination of collective and individual educational strategies outlined in the study will allow to implement educational goals in an easy and comfortable way for students. Prospects for further research include the creation of a universal pedagogical model for the development of multicultural competencies for secondary school students with an orientation to the cognitive, value-motivational, emotional and behavioral components. The implementation of this model will allow for the holistic integration of multicultural competency development strategies into school curricula. Special attention will be paid to the development of effective pedagogical approaches to the integration of cultural diversity into the educational space.

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