

Shaping competence of intercultural communication during the COVID-19

Saya Ayazbayeva, Bazarbek Mukushev, Maral Yessekeshova

Department of Vocational Education, Faculty of Computer Systems and Vocational Education, NCJSC “S.Seifullin Kazakh Agro Technical Research University”, Astana, Republic of Kazakhstan

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ABSTRACT

Shaping intercultural communication competencies during the educational process in higher education institutions is a crucial criterion for modern global education. This study considers using digital learning technologies in foreign language teaching as an efficient pedagogical strategy for developing intercultural communicative competence during the COVID-19 pandemic. The research methodology was based on a pedagogical experiment. A total of 43 students from the People's Republic of China, Kyrgyz Republic, Republic of India, and Turkmenistan participated in three study groups. Before the experiment, the indicators of digital competence and willingness to engage in intercultural communication were low, with a high correlation between them. During the one-year academic experiment, the students studied foreign languages using digital technologies. They were involved in cultural immersion programs, master's classes on intercultural communication, language exchange programs, virtual intercultural events, and online cultural resources. This contributed to improving intercultural communication and, at the same time, students' digital competence.

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Corresponding Author:

Saya Ayazbayeva

Department of Vocational Education, Faculty of Computer Systems and Vocational Education

NCJSC “S.Seifullin Kazakh Agro Technical Research University”

62 Zhenis Ave. 010011, Astana, Republic of Kazakhstan

Email: sayaayazbayeva@gmail.com

1. INTRODUCTION

The COVID-19 pandemic has changed the landscape of global communication, creating challenges in education and communication and opening up new opportunities for cultural interaction. Online education and communication have created the need for intercultural communication between students and teachers. International students in higher education require intercultural communication skills for all participants in the educational process, and the development of online learning and communication in international communities deepens this need. Organizations have adapted their communication strategies to navigate complex cultural contexts [1].

Scholars and practitioners in the field of intercultural communication have long recognized the importance of cultural sensitivity and competence in facilitating effective intercultural exchanges. The unprecedented challenges posed by the pandemic have highlighted the need for a deeper understanding of how intercultural communication practices are shaped and adapted in response to crises. Research on intercultural communication before the pandemic has focused on topics such as cultural competence, intergroup relations, and communication strategies in a multicultural environment. Scholars have studied the dynamics of cultural adaptation, intercultural conflict resolution, and role of communication technologies in bridging cultural differences. The pandemic has created new challenges and complexities in the landscape of

intercultural communication, highlighting the importance of international cooperation and the need for intercultural communication between communities to address public health crises and disinformation [2]. Problems in communication between different segments of the population in multicultural environments during the pandemic have been identified [3]. It is necessary to rethink many tasks to cover intercultural relations due to the impact of the pandemic and the importance of developing verbal and non-verbal communication, spoken and written language, relationships, and interactions between people [4].

Student learning does not always ensure a full process of intercultural communication skills development and the possibility of acquiring the necessary level of digital competence, especially in times of global change in learning processes due to COVID-19. Teaching methods have changed and the use of digital technologies has become an everyday practice. This study investigates the effectiveness of using digital technologies during foreign language learning to develop intercultural communication skills in students who study in Kazakhstan as international students. The proposed solution consists of using materials that promote the development of intercultural communication skills in students using digital technologies.

Educational strategies during the pandemic have changed radically and have been complemented by the development and use of technology, which require the development of certain competencies, digital skills, and critical thinking. This encourages learners to engage in self-education, rethink their commitments, and become proactive [5]. Globalization in education and other areas requires the development of language skills, communication, and knowledge of the cultures of different people of the world, especially English [6]. Digitalization processes have accelerated significantly due to the pandemic, which has affected the process and content of education, highlighting the importance of intercultural communication skills for quality communication in different multicultural environments. Learning and understanding languages are critical in this context, requiring organizational and pedagogical measures to improve the quality of education in a changing world. With the spread of the pandemic, inequality in access to digital tools and the possibility of quality translation have developed among different segments of the population [7].

The ability to communicate interculturally requires critical thinking skills necessary for the successful interaction of participants in educational and subsequent communication processes [8]. Foreign language proficiency and knowledge of the fundamentals of the culture of different people of the world are crucial for professionals in a changing educational landscape. Studies have examined the impact of using innovative pedagogical technologies related to communication issues through the lens of intercultural communication, considering communication processes and problems in different contexts [9], [10]. The development of components and criteria for determining the level of intercultural communication remains the focus of scientific research, and pedagogical experiments investigate the role of teachers and the effectiveness of teaching in international and intercultural teams [11], [12]. Studies have shown the effectiveness of various innovative technologies and communication tools in promoting the development of intercultural competence among students from different ethnic backgrounds [13]. Learning during the pandemic using digital tools has contributed to the development of learning opportunities for students from different countries in academic groups. Simultaneously, students need to adapt to learning in an intercultural environment, as the range of digital learning opportunities has expanded significantly [14]–[18]. The issue of adapting students to the conditions of learning in the digital space, as well as increasing the geography of participants in the educational process, requires fundamental changes and focus on effective teaching methods and the use of effective learning tools [19], [20]. Crisis conditions provoked increased risks of stress, anxiety, and, as a result, decreased readiness to study students [21].

The main focus for making education competitive and high-quality under quarantine restrictions is the development of a rational methodology for organizing the educational process, which will contribute, on the one hand, to the development of intercultural competence, understanding the global nature of the problem through communication between students from different countries, and, on the other hand, to the development of students' digital literacy. The purpose of this research was to study the effectiveness of methods and tools for the development of intercultural communication among students using digital technologies. Results achieved: educational materials have been developed that contribute to the development of intercultural communication skills among foreign students for use in the format of distance learning. These were cultural immersion programs, various online seminars for the development of intercultural communication, community exchange programs, virtual intercultural events, and online resources. The application of these strategies in teaching during the pandemic allowed students to acquire intercultural communication skills and develop digital literacy skills.

2. METHOD

A mixed-method approach was used to consider educational strategies, methods, and tools for developing student skills in intercultural communication during the pandemic. Survey, observation,

pedagogical experiment, and statistical methods were used to conduct the experiment. The experiment was conducted at the Saken Seifullin Kazakh Agrotechnical University (Republic of Kazakhstan). The research period is the 2020-2021 academic year (two academic semesters). Students and educators of the agricultural specialty (agronomic faculty) participated in the experiment. The peculiar feature of the sample was its multinational nature. The conditions for learning foreign languages (English, Russian, and Kazakh) within international academic groups, that is, with the possibility of intercultural communication, were created during the study. International students who studied in three academic groups at the university participated in the experiment, with a total of 43 persons. The sociodemographic characteristics of the participants are presented in Table 1.

Table 1. Demographic and qualification characteristics of respondents

	Groups	N (%)
Age	19-21	41 (95.4)
	22-24	2 (4.6)
Gender	Female	17 (39.5)
	Male	26 (60.5)
The country a student comes from	The People's Republic of China	12 (27.9)
	The Kyrgyz Republic	7 (16.3)
	The Republic of India	12 (27.9)
	Turkmenistan	12 (27.9)
Sample size		43 (100.0)

The pedagogical experiment was conducted in three stages: during the first stage the strategy for the academic course "Foreign language" (English, Russian) was developed, learning and illustrative materials adjusted to pandemic conditions were selected. Existing educational platforms and Internet services designed for creating interactive methodological guidelines were analyzed, and innovations in foreign language instruction under pandemic conditions were developed. A survey was conducted to establish the gender, demographics, and geographical characteristics of the respondents. The integrative approach to shaping intercultural communication skills presupposes a comprehensive study of the specific features of student groups. The survey results are listed in Table 1. The students' level of intercultural communication skills before the experiment was established through two questionnaire sections. The first questionnaire section was dedicated to measuring the respondents' level of digital literacy [20]. The second questionnaire section measured the respondents' willingness for intercultural communication under the COVID-19 pandemic conditions developed and validated by Karagul *et al.* [21]. A learning process facilitating intercultural communication skills for students was designed. Subsequently, the level of students' intercultural communication skills was re-examined. A comparative analysis of the general evaluation of student readiness for intercultural communication during the pandemic was conducted.

The obtained results were mathematically processed using online social science statistical calculators. The differences between the students' assessments of the statements in the selected scales were calculated according to the Mann-Whitney criterion and by calculating the presence of correlation relationships (Pearson correlation coefficient, r) between the studied indicators. Students and educators who participated in the experiment voluntarily consented to participate in the pedagogical experiment and personal data collecting and processing. The researchers prepared all the materials for the survey, testing, and interviews and adhered to the confidentiality and privacy policy. During the experiment, no techniques or measures were used that would affect the integrity and objectivity of the results and evaluations made by the participants. The short-term period of the experiment (one year) does not enable researchers to conduct profound studies and establish the causes of the changes in the results, assessments, and opinions of respondents. Nevertheless, this opens a new perspective for further studies.

3. RESULTS AND DISCUSSION

To conduct the experiment, the following characteristics and aspects of successful intercultural communication were primarily established regarding the highly technological instruction organization under pandemic conditions. The following principles were followed to ensure the educational process:

- Social and communicative aspects of education. Students were aware of the learning program, which helped them manage their time and prepare for the academic process in distance mode.
- Organizational and pedagogical aspects are essential for creating a favorable educational environment for intercultural communication. This was implemented using the Microsoft Teams e-platform, which facilitates smooth and seamless knowledge exchange.

- The psychological aspect: Students had the opportunity to support teachers during their studies regarding their difficulties.
- The professional and applied aspects concentrate on the thematic content, type, and orientation of thematic units and learning materials to meet future specialists' professional demands. The choice of learning materials must fulfil state-of-the-art capabilities, which will help motivate students to obtain higher grades.

Students' willingness to communicate interculturally and digitally during the COVID-19 pandemic was tested and analyzed. The survey was conducted in two steps. The results are shown as the average scores of the statements of the scales of digital literacy and attitude toward intercultural communication by students of the three educational groups as presented in Table 2.

Table 2. The overall evaluation of the student readiness for intercultural communication and digital literacy before the experiment

No. of a questionnaire section	Subscales	Score (mean \pm SD)
Questionnaire section No.1 (level of students' digital literacy)	Ethics and responsibility	2.96 \pm 0.29
	General knowledge	2.78 \pm 0.29
	Daily use	2.87 \pm 0.32
	Professional production	2.43 \pm 0.32
	Secrecy and security	2.68 \pm 0.17
	Social dimension	2.76 \pm 0.29
	Average	2.74 \pm 0.29
Questionnaire section No.2 (beliefs about intercultural competence)	Attitudes	2.74 \pm 0.25
	Knowledge	2.78 \pm 0.37
	Awareness	2.80 \pm 0.25
	Skills	2.81 \pm 0.37
	Average	2.79 \pm 0.30

The results reveal that a fair number of students have a low level of digital literacy (2.43-2.87 points, max-5 points). Most students showed average results in their beliefs about intercultural competence (2.74-2.81 points, max-5 points), which suggests the necessity of implementing the proposed principles in organizing the academic process. The correlation calculation gave a relatively predictable result- there are reliable correlational relationships between all components of digital competence and intercultural competence due to the Pearson correlation coefficient ($r=0.69-0.85$).

To improve the intercultural communication of students, the strategies, approaches, and methods for successfully actualizing intercultural communication and the conditions of quarantine restrictions were defined during one academic year in the state of distance education. Material and practical classes were studied considering their complexity at these levels. A set of intercultural knowledge that contributes to the formation of a holistic view of the country's cultural study language is highlighted: culturally linguistic and historically cultural. Strategies, methods, and tools used to shape competence in intercultural communication for international students during the COVID-19 pandemic are explained.

Cultural immersion programs allow students to interact with people from different cultures and to practice intercultural communication skills during the COVID-19 pandemic. Cross-cultural communication workshops help students develop intercultural communication skills such as active listening, cultural empathy, and effective verbal and nonverbal communication. The workshops were facilitated by experts in intercultural communication, including role-playing exercises and case studies. Language exchange programs allow students to practice language skills with native speakers of various languages. These programs can also help students to learn about other cultures and customs. Virtual intercultural events, such as cultural fairs, visiting lectures, and film screenings.

Online cultural resources, such as virtual cultural tours, cultural quizzes, and online language learning platforms, have helped students learn about different cultures and languages. Advanced strategies, methods, and tools for developing intercultural communication were implemented in a distance format, considering the restrictions caused by the pandemic during one academic year. The application of intercultural communication enhancement strategies demonstrated an average increase of 5.0% in the students' knowledge and ability scores in the second stage as shown in Table 3. Changes within the results became possible because of the application of the developed strategies, methods, and tools for successful communication.

The results of the students' digital competence and intercultural communication assessment showed that these indicators were significantly higher after the experiment ($p>0.05$, Table 3). According to the questionnaire, the indicators of digital competence of the students who participated in this study were moderate. The Pearson correlation coefficient calculation also displayed a reliable mutual impact of digital competence and intercultural communication ($r=0.68-0.87$).

Table 3. Comparison of the overall assessment of students' willingness for intercultural communication and digital literacy before and after the experiment (*t*-student's *t*-test)

No. of a questionnaire section	Subscales	Before the experiment	After the experiment	<i>t</i>	<i>p</i>
Questionnaire section No.1 (level of students' digital literacy)	Ethics and responsibility	2.96±0.29	4.02±0.35	2.01	>0.05
	General knowledge	2.78±0.29	3.95±0.23	1.98	
	Daily use	2.87±0.32	3.89±0.32	2.22	
	Professional production	2.43±0.32	3.84±0.21	2.15	
	Secrecy and security	2.68±0.17	3.78±0.33	2.06	
	Social dimension	2.76±0.29	4.03±0.15	2.12	
Questionnaire section No.2 (beliefs about intercultural competence)	Average	2.74±0.29	3.90±0.27	2.09	
	Attitudes	2.74±0.25	4.01±0.19	2.28	
	Knowledge	2.78±0.37	3.86±0.22	2.13	
	Awareness	2.80±0.25	3.93±0.31	2.07	
	Skills	2.81±0.37	4.03±0.23	2.16	
	Average	2.79±0.30	3.96±0.24	2.12	

The results indicate the efficiency of the suggested strategies, methods, and tools. Digitalizing learning processes using the studied methods and educational applications improved student intercultural communication performance. The obtained results based on the processing of student responses helped reveal that the social, communicative, and psychological aspects have a strong effect on the formation of the learning process; it facilitates gaining a high level of knowledge and the interaction between students and student-teacher communication. The ability to use the latest digital technologies and work in a distance education mode significantly influences student motivation. New technologies and radically changing educational contexts have stimulated the development of new pedagogical strategies. Many modern studies have focused on the influence of digitalization on instructors, students, and the process of foreign language learning [13]. However, the use of technologies to improve intercultural competence is much broader [22]. The impact of high technology on students' language skills was measured in the framework of language instruction. Data from scientific literature sources indicate that communication in conditions of social distancing during online learning contributes to the development of hard skills and is less effective for forming soft skills [23]. Researchers have also noted the negative impact of the pandemic on the formation of student ethnocultural competence [24].

In this study, the formation of intercultural competence in students and the development of communication skills in a multicultural environment were shown to impact their digital competence and beliefs about intercultural communication. Studies dedicated to the innovative education systems implemented in Kazakhstan's universities' space showed positive general results [25]. These are primarily the outcomes of the research group completed in the field of analysis of the creation and development of the dual education system in the training of engineering specialists and pedagogic specialities in higher education institutions in the Republic of Kazakhstan [26]–[28]. Particular research interest lies in the status of a foreign language under the conditions of globalization, which is not only a specific object of narrow linguistic research, but also an instrument for other non-linguistic thematic studies, a means of communication in the foreign language environment [16]. The present research explains the impact of foreign language competence and intercultural communication skills on the success level of socialization of a person living and studying in a homeland or international environment. The more languages people know, the better their quality of life and social integration will be. At the same time, this thesis raises several problematic issues in terms of researching the positive impact of language on career development and poses a question as to what extent and scope languages are necessary for modern business, science, education, culture, and so on [22]. In this study, the level of success in digital competence depends on the increased level of successful intercultural communication skills. Improved intercultural communication skills using digital technologies predictably contribute to the development of digital skills [29].

Regular consideration is given to the role of language in international communication [30]. The importance of English is another topic of scientific discussion. Knowledge of English is an essential indicator of intercultural competence, as it is ubiquitous worldwide in terms of intellectual, economic, commercial, and cultural aspects [7]. It is used as a tool for business and personal communication in international organizations, politics, culture, international tourism, informational technologies, and education. However, multilingualism, refereed primarily by English, only sometimes meets the needs of students [31], [32]. In the academic environment, the aspiration for effective communication at the regional and global levels necessitates implementing programs on the development of successful communication skills and knowledge of the languages of international influence, as well as taking the expectations of all participants of the educational process into consideration [33]. As has been established, the unique role of gaining intercultural communicative competencies is given to the integrative aspect (learning a foreign language alongside a

native one) and the humanitarian-and-ethical orientation of the education strategy [34]. The theoretical fundamentals of the research were based on the model of construction of the dual system of technical and pedagogic education, suggested by the researchers, in particular, the priority of the educational aims for meeting the socio-productive needs, the necessity of the organizational approach to the worldview fundamentals of the academic activity, and didactics as a component of the methodological specifics of engineering and pedagogic education [26].

In our research, the necessity of the didactic component of professional education for international training students was ensured because of the activation of successful intercultural communication skills in learning foreign languages (English, Russian) actively using digital technologies because of quarantine restrictions. The crucial aspects of developing such educational projects are social and communicative, organizational and pedagogical, psychological, professional, and applied. This upholds a comprehensive approach unrestricted by professional needs and the education system's formation under volatile learning conditions. The consideration of the peculiarities of foreign language learning in international groups is made within the framework of the development and practical testing of updated ways of forming intercultural competencies, which, in turn, are a basis for developing professional competencies. Such a set of competencies was developed based on the European rules of the College Student Educators International (ACPA) and Student Affairs Administrators in Higher Education (NASPA). In contrast, a range of pedagogical works is dedicated to studying the efficiency of the value-based approach in meeting the challenges of intercultural communication in the academic setting of higher education institutions [35]. Indeed, the pedagogical experiment revealed that student motivation in communication, the vision of prospects for foreign language learning, and the use of high-tech innovations in modern university education are of great importance.

The impact of COVID-19 pandemic on the educational process in high schools requires particular consideration. This includes the problem of significant changes taking place in some academic directions that require the application of practical skills (medicine, art, culture, and natural science) [30], [36]. The problems of foreign language learning with the introduction of digital technologies and transformation of teaching techniques have also been considered. The impact of the circumstances caused by the pandemic on student mental health and motivation levels should be given particular attention [37]. As this study demonstrated, students and teachers were challenged to resort to e-media and digital technologies more actively, given the changes in the academic domain caused by the COVID-19 pandemic. While interviewing the teachers, all four participants admitted the necessity of using technological innovations in foreign language instruction. In addition, two recognized methods are essential for developing intercultural communication skills before initiating the study.

The changes in university education caused by the pandemic and the necessity to meet the demands of contemporaneity are considered to experience embracing both positive and negative sides [38], [39]. The positive aspect includes the activation of distance forms of education, which opens the opportunities for students to shape their self-discipline skills, allows them to use a free rhythm of education, and enhances focus on interactive and virtual learning methods [12], [33]. The ways of funding ambitious academic projects, where the purchase of equipment entails high financial costs, as well as the creation of courses and educational platforms aimed at achieving educational goals under COVID-19 pandemic conditions, are being analyzed. The prospects of further research embrace the study of the intercultural communication influence on learning success and the ability to advocate in education and cognitive activity. The active development of methods for adapting international students to a multicultural environment implies exploring the advancement of the global education system and elaborating on the most effective approaches and techniques for creating harmony in international student groups.

4. CONCLUSION

The study found that online learning with the use of relevant material during the pandemic had a positive impact on the formation of intercultural competence and contributed to increased cultural understanding. The developed online learning tools for students contributed to a statistically significant improvement in students' intercultural communication. Concurrently, the students' digital literacy rates have increased. The study expands the existing knowledge in this area and provides practical implications for communication practitioners and educators seeking to improve their level of competence in intercultural communication in times of crisis. As key indicators of the efficiency of the organizational and pedagogical model of international student adaptation, the change in the formation of intercultural communication skills and the level of digital literacy among international students. The pedagogical experiment revealed the effectiveness of using digital technologies in developing intercultural communication under COVID-19 pandemic conditions. Using the methods, strategies, means, and tools developed by the authors in students' distance learning conditions contributed to a reliable improvement of digital competence and the ability to

intercultural communication. Shaping intercultural communication competencies contributes to students' general speech abilities, presupposes foreign language learning, and is a prerequisite for training a competitive specialist in the labor market.

The suggested project has constraints, but they also allow clarifying the methods and technological solutions for elaboration. The further development of new pedagogical technologies and methods of teaching under the conditions of globalization may become a decisive factor in improving the quality of instruction in university education. The strategies, methods, and tools provide a valuable framework for shaping students' intercultural communication competence. Generally, the research emphasizes the importance of continuing to invest in developing intercultural competence in students during the COVID-19 pandemic and in the post-pandemic era, where intercultural communication is increasingly vital for success in professional activity.




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BIOGRAPHIES OF AUTHORS






Saya Ayazbayeva    is a Ph.D. student in the Department of Vocational Education at NCJSC "S.Seifullin Kazakh Agro Technical Research University". Her research focuses on intercultural communication in pedagogy, and multilingual education. She can be contacted at email: sayaayazbayeva@gmail.com.



Bazarbek Mukushev    is a Ph.D. He is a full professor in the Department of Information and Communication Technology at NCJSC "S.Seifullin Kazakh Agro Technical Research University". His research and teaching interests are related to information and communication technologies. He can be contacted at email: mba555@mail.ru.



Maral Yessekeshova    is a Candidate in Pedagogical Sciences, Associate professor in the Department of Vocational Education at NCJSC "S.Seifullin Kazakh Agro Technical Research University". Her research focuses on Higher School Pedagogy, pedagogical innovation studies, science studies, history of education, pedagogy, and methodology of educational work. She can be contacted at email: maralastanaa@mail.ru.