

Leveraging Telecollaboration and Virtual Mobility to Enhance Intercultural Communicative Competence in English Language Teaching Classrooms in China

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ABSTRACT

Introduction: This study explores the use of telecollaboration and virtual mobility to enhance intercultural communicative competence (ICC) in English Language Teaching (ELT) classrooms in China.

Objectives: By integrating digital tools and online platforms, the research investigates how virtual exchanges between Chinese students and their international peers foster cross-cultural understanding and communication skills. Along with the identification of the issues associated with the research area, the inclusion of Byram's model of intercultural communicative competence has facilitated the understanding of the topic by providing an astute notion. An expansive analysis of existing research materials has facilitated the identification of the research variables "mode of interaction", "instructor guidance", "technology usage", "group composition", "cultural sensitivity", and "intercultural communicative competence" based on which the interplay has been explored.

Methods: A mixed method approach has been estimated to be the most beneficial approach towards exploring the topic wherein upon extensive segregation 5 articles have been selected with the implementation of the PRISMA Framework for the qualitative study. To conduct the quantitative analysis a sample of 415 English language teachers from China has been selected with the inclusion of the Krejcie & Morgan table. The responses have been evaluated with the help of the IBM SPSS software which has facilitated the identification that the variables selected for the research establish a strong interrelationship among themselves. Through the multiple linear regression analysis, it could be observed that a sig value lesser than 0.05 has been achieved in every case thus exhibiting a strong relationship prevalent among the independent variables with the dependent variable. Furthermore, further avenues of research have been furnished along with stating the significance the research holds in contemporary academic literature.

Results: The findings underscore the potential of virtual mobility in enhancing ICC, offering valuable insights for educators seeking to integrate technology into ELT for global competence development. One of the main objectives of EFL instruction in China is to increase students' intercultural communication competence (ICC), and pre-service English instructors' ICC is crucial to this process.

Conclusions: The purpose of this study is to examine the ICC levels of pre-service English instructors at a Chinese public institution and determine whether there are any disparities between their ICC levels and their genders or family backgrounds.

Keywords: Technology, Collaborative learning, ESL education, Cultural learning, Cross-cultural communication.

INTRODUCTION

Telecollaboration and virtual mobility is important to enhance intercultural communicative competence and it is considered by English teachers to enhance the quality of learning. Globalisation is a key trend in the field of learning; hence, universities are focusing on globalizing their curriculum as efficiently as possible (Emir, 2024). The

consideration of innovative learning approaches should not be neglected in this matter and the scope should be helpful to enhance the virtual learning quality as much as possible (Zečević, 2022). Despite the growth in the use of technology, the use of telecollaboration in the English learning classroom still gained a very limited level of attention and lack of effective perception about the usage of telecollaboration is still observed among the English teachers (Batunan, 2023). Additionally, in nations like China, few telecollaboration projects are taking place in the universities that are still not considered sufficient to enhance the intercultural communicative competence (Liu L., 2024) (Lan, 2023). Hence, studying efficiently on the different aspects of this topic can effectively provide a more in-depth idea about it.

The aim of the research is identifying the significance of leveraging telecollaboration and virtual mobility that can enhance the intercultural communicative competence in English language teaching classrooms in China. The study was conducted by considering both qualitative and quantitative data. The study mainly covered the opinion of English language teachers. In addition, the study mainly considers incorporation of those information that are closely related to intercultural communicative competence and role of technology in this matter. The different aspects of telecollaboration used in the field of learning can be explored through conducting the study. The opinions of teachers who teach subjects other than English are not to be considered in this study.

OBJECTIVES

By integrating digital tools and online platforms, the research investigates how virtual exchanges between Chinese students and their international peers foster cross-cultural understanding and communication skills. Along with the identification of the issues associated with the research area, the inclusion of Byram's model of intercultural communicative competence has facilitated the understanding of the topic by providing an astute notion. An expansive analysis of existing research materials has facilitated the identification of the research variables "mode of interaction", "instructor guidance", "technology usage", "group composition", "cultural sensitivity", and "intercultural communicative competence" based on which the interplay has been explored.

H1: Mode of interaction significantly impacts intercultural communicative competence

With the increasing interconnection across geographical borders, leveraging different modes of communication can help individuals navigate cultural differences more effectively and confidently (Hossain, 2024). The mode of interaction plays a key role in shaping the communication pathways as it introduces learners to diverse perspectives, fostering intercultural sensitivity and awareness (Challoumis, 2024) (Liu S. G., Beyond borders: exploring the impact of augmented reality on intercultural competence and L2 learning motivation in EFL learners. , 2023). Language education through virtual mobility encourages students to participate in joint projects, discussions, or even simulations, thereby strengthening their knowledge about different cultures, and enhancing their intercultural communicative competence (Dooley, 2022) (Angelini, 2024). Depending on the mode of interaction the students are required to adapt their communication styles and understand the subtleties of cross-cultural communication. Herein, the mode of interaction can be asynchronous providing the learners with more time to reflect on their responses and research cultural contexts, which can promote deeper understanding or synchronous which helps students develop quick thinking and adaptability (Rigo, 2021). The mode of interaction influences the development of intercultural communicative competence by shaping the way people engage with cultural differences, interpret communication, and adapts their behaviours (Aririguzoh, 2022).

H2: Instructor guidance significantly impacts intercultural communicative competence.

In the context of intercultural communication, the guidance of the instructors is integral as it guides the understanding of how cultural dimensions influence communication (Ramzan, 2023). In language education, teachers play a key role in fostering an educational setting where students can develop cultural awareness, empathy, and adaptability in their communication (Eden, 2024). In the context of China, a prevalence of cultural dimensions can be observed wherein the teachers are paramount to demonstrate theoretical foundations such as individualism vs. collectivism, power distance, and others (Wang, 2024). An instructor who fosters an open, respectful environment provides students with a learning space where they feel comfortable expressing themselves, asking questions, and sharing their cultural perspectives (Guberina, 2023) (Brazill, 2022). This exchange deepens students' understanding of intercultural differences and promotes empathy while at the same time enhancing the possibilities of virtual

mobility (Simões, 2023). Instructors are also significant in affording exposure to diverse cultures with the arrangement of international exchange programs, telecollaboration projects, or virtual meetings which can provide students with opportunities to engage with peers from diverse cultural backgrounds (Yang, 2020).

H3: Technology usage significantly impacts intercultural communicative competence.

Technology, particularly through the internet, allows individuals to communicate with others from different cultural backgrounds in real-time, regardless of geographical distance (Nikitenko, 2024) (Garlinska, 2023). Despite facilitating exposure to a wider range of cultural perspectives, broadening learners' viewpoints on other cultures and enhancing their ability to understand and appreciate cultural differences, regarding virtual mobility technology usage or technological competence is a key factor (Hossain, 2024). Technology enables the arranging or accessibility of virtual exchange programs or telecollaboration projects, where students or professionals from different countries collaborate on common projects, research, or tasks thus strengthening cross-cultural understanding and collaboration (O'Dowd, 2021). Technology breaks down the barriers of time, space, and location, capacitating students from diverse regions of the world to interact at their convenience (Adu, 2022). Furthermore, technology offers the availability of numerous language-learning applications such as Duolingo, Babbel, or others that help learners understand linguistic nuances, idioms, and expressions from different cultures (Tranova, 2023). Mastering a language is a critical component of ICC, as it enables individuals to express themselves appropriately within different cultural contexts and technology provides access to a wealth of information (Xia, 2024).

H4: Group composition significantly impacts intercultural communicative competence

A group composed of individuals from various cultural backgrounds exposes members to different communication styles, values, norms, and expectations (Ghaemi, 2023). This diversity allows participants to develop a deeper understanding of how culture influences communication. The possibility of interaction with individuals with different worldviews enhances learners' ability to recognise and respect cultural differences (Ghaemi, 2023). In addition to this, a diverse group offers opportunities to learn about specific cultural practices, taboos, languages, and non-verbal communication cues (Malika, 2023). This firsthand exposure helps learners appreciate the complexities of intercultural interactions, leading to more nuanced and effective communication. In a multicultural group, members often need to adapt their communication strategies to accommodate others' cultural preferences (Ariyuzoh, 2022). This not only helps with incurring a sense of flexibility among students but also helps with adjusting language use, communication tone, directness, or non-verbal cues (Kalem-Mehmet, 2023). A multicultural group allows members to learn from each other's experiences and perspectives (Ghantous, 2024). In the context of ICC, collaborative learning enhances critical thinking and problem-solving skills among students while fostering deeper cultural awareness (Noviyanti, 2024).

H5: Mode of interaction significantly impacts cultural sensitivity.

Prior research indicates that the implementation of artificial intelligence (AI) conversation systems for teaching English as a foreign language (EFL) has successfully enhanced the reading, writing, and paying attention skills of college students (Zhai, 2023). However, there are not many systematic evaluations that concentrate on EFL students at universities' evidence-based interpersonal competency (Boudreau, 2023). Since acknowledging and respecting the varied cultural origins, beliefs, and principles of those in the audience fosters significant connections and a greater sense of diversity, cultural sensitivity is a crucial component of efficient interaction, especially for speaking individuals hoping to create consistent and beneficial experiences for their listeners (Baber, 2020). However, it takes deliberate effort to put aside one's own cultural viewpoint and actively connect with the many viewpoints of their target group supporters, thus cultural sensitivity is sometimes not natural or intuitive (Mangla, 2021). Numerous speaking specialists may find it to be both a difficult learning process and a continuous chance for introspection, education, and personal development. Hence, it is imperative to evaluate the impact of the mode of interaction on cultural sensitivity (Seo, 2021).

H6: Instructor guidance significantly impacts cultural sensitivity.

Students in schools throughout the world are becoming more and more culturally and linguistically varied because of global migratory movements and socioeconomic division (Johnson, 2023). Because culturally coordinated

learning settings are directly linked to students' academic progress, intellectual awareness, and interpersonal ability, there is an urgent need for instructors who are culturally knowledgeable (Gradellini, 2021). The multidisciplinary disciplines of culturally competent psychology, nursing, and intercultural therapy provide the foundation of the extensive study on cultural competency (Chiba, 2021). The mindsets, behaviours, principles, convictions, knowledge, and abilities of professionals who work closely with people from different cultural backgrounds are commonly measured using this construct (Lorenz, 2021). Multidisciplinary research is the main source of cultural competency in teacher training and educator preparedness (Johnson, 2023). Multicultural education and cultural competency are connected but quite different (Romijn, 2021). Civil rights movements and battles against racism in education are the roots of multiculturalism and cultural competency (Gradellini, 2021). An analysis of culture should start with removing the various layers of identity management, practice, and presence of every student in the classroom to better promote intercultural acceptance and participation among students and teachers (Oosthuizen, 2020).

H7: Technology usage significantly impacts cultural sensitivity.

Previous research has shown that children and youth in low- and middle-income countries (LMICs) have learning results that are far below expectations (Hennessy, 2022). Encouraging teachers in becoming successful educators may be greatly aided by early childhood education and post-service teacher professional development (TPD) (Shadiev, 2021). Learning results in primary schools in LMICs are positively impacted by teacher education initiatives (Hennessy, 2022). However, cultural variables, time, school officials' supervision, and the requirement for a digital community may all have a significant impact on teachers' online writing involvement patterns (Song, 2023). Previous research has demonstrated the numerous benefits of technology-assisted language and cultural acquisition (Shadiev, 2021). The development of many skills and competencies, including linguistic, digital, and international ones, as well as motivation, are all benefited by technology-supported communication and intercultural education (Ismailov., 2021). There is a lack of investigation on the relationships between usage of technology and cultural sensitivity (Salih, 2021) (Liu G. M., 2023). Hence, this adds value for by evaluating this relationship that help educators, learners and policymakers as well.

H8: Group composition significantly impacts cultural sensitivity.

Even yet, the question of how to increase students' knowledge of their home culture through language study has garnered interest for over 10 years (Stahl, 2021). Few studies have been conducted on the problem, and few workable solutions have been proposed (Alam, 2023). Furthermore, it seems that the issue affects all Chinese colleges, regardless of how prominent they are (Salih, 2021). According to the minimal research in this field, university students struggled when asked to discuss their unique culture in English (Baber, 2020). Byram's (1997) research on intercultural communicative competence (ICC) offers one perspective on how students might improve their capacity to discuss their respective culture in a second or foreign language (Ilyas, 2021). Therefore, it is critical to evaluate how non-native learning groups could communicate cultural information using English as a multilingual speech (Wu, 2021). Intercultural education aims to alter multiculturalism, oppose prejudice, foster unity, and uphold equal treatment, honour, and respect for various cultural identities (Stahl, 2021). It is thought to be a social educational approach that fosters beneficial interactions between individuals and groups of people from various cultural backgrounds (Wu, 2021).

H9: Cultural sensitivity significantly impacts intercultural communicative competence.

Cultural sensitivity helps in recognising and acknowledging the differences in norms, values, and communication styles which in turn facilitates the development of effective communication and positive relationships in intercultural settings (Aririguzoh, 2022). Cultural sensitivity helps individuals steer clear of stereotypes, generalisations, or biases about different cultures or people from different geographical regions (Guan, 2024). Rather than relying on preconceived notions, cultural sensitivity capacitates individuals to approach others as unique individuals and seek to understand their perspectives and experiences wherein this open-minded approach enhances the quality of intercultural communication (Zhou, 2024). Since it is generally accepted that language and culture are closely related, intercultural communication competence, or ICC, has emerged as a goal of education in many nations (Heinimäki, 2021) (Joia, 2021). "Focusing on the cultivation of intercultural communicative competence" was one of the teaching

criteria outlined in the English Teaching Syllabus for English Major Program in Higher Education (2000)(Luo, 2022) (Lei, 2020).

METHODS

The study is conducted by considering a mixed method research approach. Hence, it is expected that both qualitative and quantitative data is to be integrated to make the research outcome effective. It can be stated that mixed-method research design is associated with benefits like gaining both generalised and in-depth data that can make the research very information rich (Dawadi, 2021). Additionally, the mixed method can be effective to cover different areas under the research topic, hence, it can be stated that the mixed method research design is impactful to maintaining flexibility in a research (Taherdoost, 2022). The primary data and secondary data collection both are taking place in the research work (as mixed-method research design is applied here). The primary data collection can be done through the help of survey methods that can be helpful in the study to collect data from a large number of respondents. In addition, the survey method can be beneficial in this study because of its effective feature of easy monitoring and the opinion of many people can be covered easily through it (Karunarathna, 2024).

Despite the survey method, some articles are selected as the source of secondary data. The in-depth analysis of the information from the article can be helpful for providing an effective idea about various aspects of the study. Methods like sampling are used to select sources for quantitative data analysis. It can be stated that the population of English language teachers in China is identified in millions (Gamlam, 2021). Hence, a sampling method is to be incorporated for drawing a manageable and small subset from the huge number of populations. Applying the “Krejcie & Morgan” table, it can be stated that the 384 number of people is suggested for population size of 1, 00,000 or above (nursesrevisionuganda.com., 2023). The identified population size in the study is huge, hence, it can be stated that taking sample size more than 384 is suitable in this study. Finally, 415 sample sizes were taken in this study to conduct the survey. Additionally, a PRISMA framework should be used in the study in terms of selecting the most repeat and appropriate source of secondary data. Below, the steps of selection are represented within the PRISMA:

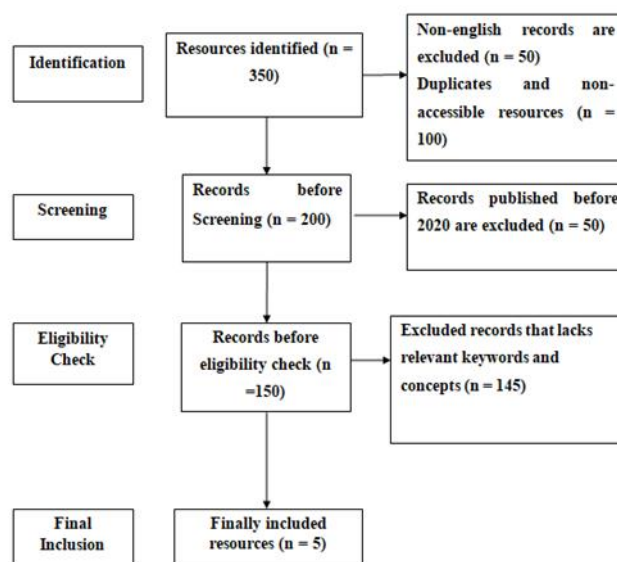


Figure 1: PRISMA Framework

Based on the repressed criteria's (inclusion and exclusion criteria's), it can be stated that 5 articles are included to conduct the secondary data collection. As identified in the study, both quantitative and qualitative data analysis methods are applied in this research work. The quantitative data analysis can be done through the help of IBM SPSS tools that are effective to generate statistical outcomes in the research work that are impactful to identify the relation between variables (Fiandini, 2024). In addition, qualitative data analysis (based on secondary data) is done through the help of a thematic analysis method. The thematic analysis method includes familiarization of data, making codes, generation as well as reviewing themes that can be followed by writing under the themes (Christou, 2022). The

research work includes the involvement of human respondents; hence, none of the respondents are harmed or manipulated during the survey process. Additionally, things such as integrity, confidentiality and transparency are considered in the study along with maintaining general research ethics (Cysneiros, 2021). Hence, it is expected that many factors as well as underlying concepts regarding the internal communicative competence, telecollaboration and virtual mobility can be identified.

RESULTS

Quantitative analysis

Demographic details

The Demographic analysis reflects the characteristics of the selected respondents who have provided data to the study. Search underlines trends and patterns of the selected respondents for the helping enhancing the findings of the study. It is evident from table 1 below that the majority of the respondents belong to an age group of 25 to 30 years or 31 to 40 years accounting for 45.5 and 34.2% of the total sample respectively. Hence, a comparatively younger generation has shown their interest in the study then the elder generation.

		Count	Column N %
Age	25 to 30 years	189	45.5%
	31 to 40 years	142	34.2%
	41 to 50 years	56	13.5%
	More than 50 years	28	6.7%
Education	Bachelor's degree	148	35.7%
	Master's degree	151	36.4%
	Doctoral degree	116	28.0%
Training	Yes	194	46.7%
	No	221	53.3%
Specialisation	English language teaching	14	3.4%
	English literature	241	58.1%
	Linguistics	91	21.9%
	Education	69	16.6%

Table 1: Demographic Detail

The Demographic data has also revealed that the majority of the respondents are holding a master's degree accounting for 36.4% of the sample. 35.7% of the sample has a bachelor's degree while the remaining 28% has a doctoral degree. This reflects the well-educated teaching population in this field. However, one drawback of the population is also reflected that 53.3% of the teachers have not received training regarding intercultural communicative competence modules. 58.1% of the teachers are observed to have specialization in English literature while others constitute specialised subjects including English language teaching, linguistics and education.

Reliability Analysis

The main purpose of the reliability test is to determine the significance of all selected variables. Six items are tested through the help of a reliability test. The Cronbach alpha is performed through a reliability test.

Cronbach's Alpha	Reliability Statistics	N of Items
	Cronbach's Alpha Based on Standardized Items	
.963	.963	6

Table 2: Cronbach Alpha

Based on the outcome of table 2, it has been determined that the Cronbach alpha value becomes .963. The value of Cronbach alpha should be between 0.7 and 0.9. In this research, the value exists between this ranges that means a higher level of reliability of study outcome. Furthermore, it also represents that the implemented Likert scale is also significant for this research to measure the reliability of individual items.

Pearson Correlation Coefficient

Pearson's Correlation Coefficient analysis is conducted in order to determine the rate of correlation existing between two variables. Generally, a correlation value above 0.8 depicts strong correlation while value within 0.3 to 0.8 is considered as a moderate correlation

		Correlations					
		MI	IG	TU	GC	CS	ICC
MI	Pearson Correlation	1	.765**	.856**	.936**	.732**	.932**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	415	415	415	415	415	415
IG	Pearson Correlation	.765**	1	.767**	.756**	.605**	.752**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	415	415	415	415	415	415
TU	Pearson Correlation	.856**	.767**	1	.913**	.716**	.921**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	415	415	415	415	415	415
GC	Pearson Correlation	.936**	.756**	.913**	1	.784**	.993**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	415	415	415	415	415	415
CS	Pearson Correlation	.732**	.605**	.716**	.784**	1	.792**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	415	415	415	415	415	415
ICC	Pearson Correlation	.932**	.752**	.921**	.993**	.792**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	415	415	415	415	415	415

** . Correlation is significant at the 0.01 level (2-tailed).

Table 3: Pearson's Correlation

It can be seen from table 3 that in the case of the first variable mode of instruction majority of the items have generated a correlation value that is more than 0.8. Hence, in the case of this variable, a strong correlation exists with the other variables. For the variable instructor's guidance, the correlation range is within 0.3 to 0.8 depicting a moderate correlation. Technology usage and group composition both are observed to be having a high correlation with the other independent variables as well, with values more than 0.8 majorly. The mediating variable cultural sensitivity has a moderate correlation with values within the range of 0.3 to 0.8.

Multiple Linear Regression Analysis

The Objective of conducting a regression analysis is to determine the strength of the relationship existing among the independent variables with the dependent variables in the research. A strong relationship among the independent and dependent variables is established if the significance value is obtained to be less than or equal to 0.05.

		Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B
		B	Std. Error	Beta			Lower Bound Upper Bound
1	(Constant)	-.044	.019		-2.287	.023	-.082 -.006
	MI	.034	.017	.032	2.017	.044	.001 .067
	IG	-.020	.009	-.019	-2.175	.030	-.038 -.002
	TU	.095	.014	.094	6.762	.000	.067 .123
	GC	.873	.021	.865	41.652	.000	.832 .914
	CS	.033	.008	.034	3.936	.000	.017 .050

a. Dependent Variable: ICC

Table 4: Multiple Linear Regression Analysis

Table 4 depicts the significant values obtained for each of the independent variables, mode of instruction, instructor guidance, and technology usage and group composition along with the mediating variable cultural sensitivity. The value for each of these variables is observed to be obtained less than 0.05 in every case. Hence, a strong relationship is seen to be prevalent among the independent variables with the dependent variable. Additionally, the mediating variable is also observed to be having a strong impact over the dependent variable. The impact of the mediating variable on the relationship between the independent and dependent variables in this research will be further

analysed with the help of the sobel test. The multiple linear regression analysis has hence confirmed the effectiveness of the identified independent variables in this research in supporting the studies.

Sobel Test

Model	Unstandardized Coefficients		Coefficients ^a	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Standardized Coefficients Beta			Lower Bound	Upper Bound
1 (Constant)	.567	.092		6.149	.000	.385	.748
CS	.768	.029	.792	26.331	.000	.711	.826

a. Dependent Variable: ICC

Table 5: Relationship between Cultural sensitivity and Intercultural Communicative Competence

Table 5 identifies the relationship existing between the mediating variable and the dependent variable. A strong t value is obtained which is above 1.96 at 26.331.

Model	Unstandardized Coefficients		Coefficients ^a	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Standardized Coefficients Beta			Lower Bound	Upper Bound
1 (Constant)	.738	.109		6.753	.000	.523	.953
MI	.793	.036	.732	21.846	.000	.722	.865

a. Dependent Variable: CS

Table 6: Relationship between Mode of interaction and Cultural sensitivity

Table 6 depicts the value of t statistics for Mode of interaction and cultural sensitivity. A t-statistics value of 21.846 is obtained for the relationship between mode of interaction and cultural sensitivity.

Input:	Test statistic:	p-value:
t_a 26.331	Sobel test: 16.81282613	0
t_b 21.846	Aroian test: 16.80564925	0
	Goodman test: 16.82001221	0
Reset all		Calculate

Figure 2: Sobel test for Mode of interactions

Utilising both these values a sobel test is conducted for the mode of interactions variable. A t-statistic value of 16.8.2 is obtained which satisfies the necessities of t statistics being 1.96 or more. Hence, mediating impact of cultural sensitivity is proved to be prevalent for this variable.

Model	Unstandardized Coefficients		Coefficients ^a	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Standardized Coefficient Beta			Lower Bound	Upper Bound
1 (Constant)	1.128	.128		8.790	.000	.876	1.380
IG	.632	.041	.605	15.450	.000	.551	.712

a. Dependent Variable: CS

Table 7: Relationship between Instructor guidance and Cultural sensitivity

The t-statistics value between instructor guidance and cultural sensitivity is obtained at 15.45 zero. The t statistics value between the mediating variable and dependent variable is kept constant at 26.331.

Input:		Test statistic:		p-value:
t_a	26.331	Sobel test:	13.32546199	0
t_b	15.450	Aroian test:	13.31831907	0
		Goodman test:	13.33261641	0
		Reset all	Calculate	

Figure 2: Sobel test for Instructor guidance

Utilising both these values, a sobel test t-statistics of 13.325 is obtained. The satisfactory tea statistics values about 1.96 prove the mediating impact of cultural sensitivity on the relationship between instructor guidance and intercultural communication competence.

		Coefficients ^a		t	Sig.	95.0% Confidence Interval for B	
Model		Unstandardized Coefficients	Standardized Coefficients			Lower Bound	Upper Bound
	B	Std. Error	Beta				
1	(Constant)	.873		8.084	.000	.661	1.086
	TU	.745	.716	20.853	.000	.674	.815

a. Dependent Variable: CS

Table 8: Relationship between Technology usage and Cultural sensitivity

The t-statistics value between Technology usage and Cultural sensitivity is generated at 20.853, satisfying requirements of the analysis.

Input:		Test statistic:		p-value:
t_a	26.331	Sobel test:	16.34740351	0
t_b	20.853	Aroian test:	16.34016322	0
		Goodman test:	16.35465343	0
		Reset all	Calculate	

Figure 3: Sobel test for Technology usage

The value from Table 8 above and the value from table 5, are used for conducting the sobel test for Technology usage. The t-statorscs for Sobel test is generated to be 16.347, thus proving the mediating impact of cultural sensitivity in this relationship as well.

		Coefficients ^a		t	Sig.	95.0% Confidence Interval for B	
Model		Unstandardized Coefficients	Standardized Coefficients			Lower Bound	Upper Bound
	B	Std. Error	Beta				
1	(Constant)	.678		7.084	.000	.490	.866
	GC	.816	.784	25.677	.000	.753	.878

a. Dependent Variable: CS

Table 9: Relationship between Group composition and Cultural sensitivity

The t-statistics value for Group composition and Cultural sensitivity is 25.677. The value from table 5 is yet again kept constant between the dependent and mediating variable.

Input:		Test statistic:		p-value:
t_a	26.331	Sobel test:	18.38324368	0
t_b	25.677	Aroian test:	18.37645208	0
		Goodman test:	18.39004282	0
		Reset all	Calculate	

Figure 4: Sobel test for Group composition

The Sobel test conducted for Group composition has a value of 18.383. This value also satisfied the necessary range for t-statistics. Hence, this sobel test has proven the mediating impact of cultural sensitivity on the relationship between group composition and intercultural communicative competence as well.

Hypothesis Testing

The hypothesis testing is performed here to figure out which variables become supported in this study, and which are not. Following the outcome of multiple linear regression, and sobel test- the result of hypothesis testing is discussed here.

Hypotheses	Status
H1: Mode of interaction significantly impacts intercultural communicative competence	Supported
H2: Instructor guidance significantly impacts intercultural communicative competence	Supported
H3: Technology usage significantly impacts intercultural communicative competence	Supported
H4: Group composition significantly impacts intercultural communicative competence	Supported
H5: Mode of interaction significantly impacts cultural sensitivity	Supported
H6: Instructor guidance significantly impacts cultural sensitivity	Supported
H7: Technology usage significantly impacts cultural sensitivity	Supported
H8: Group composition significantly impacts cultural sensitivity	Supported
H9: Cultural sensitivity significantly impacts intercultural communicative competence	Supported

Table 10: Hypotheses Testing

Following the outcome of table 10, it has been understood that all formulated hypotheses from H1 to H9 become supported in this study. H1 to H4 are tested through multiple linear regression analysis, and H5 to H9 are tested by sobel test. Most of the respondents defined that mode of interaction helps to encourage beyond independent learning and deliver an in-depth understanding about a subject. On the other hand, through help of instructor guidance students also keep aware about the ICC module. Similarly, using digital technology tools, it can help students to improve their knowledge exchange ability. Along with this, through help of cultural sensitivity teachers can interpret the importance of cultures to every student. Moreover, they can promote intercultural interactions, and behavioral-cognitive abilities of study.

Qualitative analysis

Fostering Intercultural Competence through Translanguaging in Virtual Chinese Language Exchange

On the effectiveness of developing intercultural communicative competence using translanguaging in the virtual Chinese language partnership, enhancing cultural and language recognition is identified. Translanguaging entails the use of multiple languages that could be used interchangeably, and the participant gets a very dynamic learning arena. When the learners are using Chinese along with other languages, they are able to appreciate cultural backgrounds of communications (Guo, 2023). Virtual exchanges are a good way to practice real-life interactions with people for whose language you are learning, thus helping learners achieve higher levels of linguistic and intercultural appropriateness. Moreover, the adopted trans-language also fosters a learner-centred approach, given that the participants are able to deal with linguistic barriers in a unique manner.

Online activities enhance intercultural competence in language learning

Given this, the web-based interactions contribute significantly to the development of intercultural communicative competence with regard to language acquisition. Business social networks link learners to students from other cultures, thereby creating informed dynamic brainstorming. Discussions, group and cultural performances provide learners with a kind of the policy of tolerance to the people with different points of view. These ones make participants use language in real-life situations in a more efficient and culturally appropriate manner (Alsubaihi, 2024). Furthermore, online works as a risk-free option in terms of practicing the language and enhancing learner's self-possibility. Cultural aspects in the language tasks enable the students to develop global competencies while completing these exercises to practice multiculturalism and understanding of cultures other than their own.

Telecollaboration fosters EFL learners' language skills and intercultural awareness

Telecollaboration is very effective in enhancing EFL learners' language proficiency and developing their intercultural communicative competence because it provides them with real life experiences in telecollaborative communication. The dynamic intercultural interactions with first language peers in other cultural and linguistic contexts foster development of speaking and listening, as well as reading and writing skills (Yeh, 2023). These collaborative learning activities allow students to interact with colleagues who use different accents and intonations and are exposed to

different cultural contexts. In the same way, telecollaboration fosters critical thinking as well as flexibility at the same time that learners negotiate interlanguage and intercultural. The concept of dynamic is not only the enhancement of language acquisition alone, but it also provides the learners best ways to communicate in the intercultural global society.

AI enhances university students' intercultural communication competence effectively

AI improves University student's intercultural communication competence based on the availability and the interaction with various learning delivery modes. Real-life conversation practice is imposed through the use of AI-based tools in convergent communication and students are able to practice languages as they interact with computer-aided cultural realities. Computer operated platforms offer feedback which aids the student to enhance his/her language use and etiquette (Klimova, 2024). Furthermore, AI enables the user to understand cultural content from all over the world in the form of articles, video clips, and virtual exhibits showcasing people's diverse lifestyle. Thus, with the help of AI, integrated into learning languages at the universities, universities can foster realistic and safe environments.

Augmented reality enhances EFL learners' intercultural competence and motivation

Augmented reality (AR) enables cultural contexts and culture-related assignments that make it possible for learners to practice the reality of a cultural setting in the virtual space. For instance, students could use the programme to go through museums, fairs or acting out typical situations in a culturally diverse environment. They enhance understanding of cultural others and recruit for empathy Training such as through cultural immersion (Liu S. G., Beyond borders: exploring the impact of augmented reality on intercultural competence and L2 learning motivation in EFL learners., 2023). AR also fosters enjoyment of learning language, something that challenges the learner's curiosity, interest and motive. Language use and cultural practices are integrated in AR tasks in a way that helps learner's associate language use with cultural practices.

DISCUSSION

The findings of the present study suggest future research implications that are mainly drawn in the following aspects for longitudinal research should be conducted to evaluate the effectiveness of telecollaboration and virtual mobility in enhancing ICC in class settings in China. Teachers and other stakeholders can improve ICC outcomes by refining tools and creating best practices, expanding into various technological phenomena, and applying teaching techniques. To study, group diversity, the modes of group interaction and the alignment of groups' practices to national education policies is essential. Also, considering a number of students and their learning characteristics might be useful for better understanding of ICC development.

This is why it is advisable for further research to extend the geographical scope of its investigation of educational contexts across China in order to provide coverage of a wider spectrum of experiences and teaching practices with regard to ICC development. More specifically, selected longitudinal studies should be affected in order to assess the distal effects of telecollaboration and virtual mobility on ICC. Moreover, the development of benchmark reference for evaluating ICC effectiveness in English classrooms would also be useful when it comes to the matter of outcome monitoring. The authorities and decision-makers should allocate more resources to the development of teachers' professional competence in terms of strategy and technology dedicated to ICC learning in both didactical and technological. The exact effect of synchronous and asynchronous communication modes on intercultural learning needs to be further examined. Finally, inclusion of age, learning preferences and styles of the other diverse students' demographic characteristics in future studies will aid ICC to be sensitive to the needs of the different types of students in supporting its initiatives.

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