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ENHANCING CROSS-CULTURAL COMMUNICATION PERFORMANCE THROUGH COMMUNICATION TECHNOLOGY QUALITY

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ABSTRACT

Purpose – To study the mediating role of communication technology quality on the relationship between cross-culture and cross-cultural communication performance.

Methodology – This study surveyed 400 employees in a multicultural smart electronics manufacturing industry. The data collection instruments were questionnaires measuring cross-cultural acceptance (CCA), communication technology quality (TQ), and cross-cultural communication effectiveness (ECC). The data analysis used structural equation modeling (SEM) technique to test hypotheses and verify the analytical model.

Results – The results showed that cross-cultural acceptance did not directly affect cross-cultural communication (ECC) effectiveness, but communication technology quality (TQ) played an important role in mediating between cross-cultural acceptance (CCA) and cross-cultural communication effectiveness, with TQ facilitating communication clarity and reducing misunderstandings. The results confirmed that TQ had a positive effect on communication in culturally diverse organizations and was an important factor promoting communication effectiveness in diverse environments.

Implications – The study's findings highlight the need for organizations to invest in quality and adaptable communication technologies to support cross-cultural communication and reduce communication barriers arising from cultural differences. High-quality technology facilitates effective collaboration and cooperation.

Originality/Value – This research advances knowledge on organizational culture management by highlighting the important role of communication technology quality in enhancing cross-cultural communication effectiveness. The results confirm that technology quality can be an important mediator in managing cultural diversity in global organizations. This research provides a new perspective on the use of technology to support communication in organizations with employees from diverse cultures.

Keywords: Cross-cultural acceptance, Communication technology quality, Cross-cultural communication

Paper Type: Research Article

INTRODUCTION

Research on the impact of organizational culture and technology on internal communication in organizations with employees from different cultures is a topic of significant interest in the era of globalization. Geert Hofstede's model of cultural dimensions has been used as an important tool in understanding how cultural differences affect the communication styles of employees in organizations. Altaf's (2011) study indicated that cultural dimensions such as power distance, individualism, and uncertainty avoidance influence organizational communication. Cultural diversity in modern organizations is also complex and has a direct impact on employee performance. Wei (2024) stated that cultural diversity not only affects the creation of a suitable

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work atmosphere but also affects the understanding and coordination of teams from different backgrounds. These cultural differences can be both empowering and hindering factors, depending on how well employees are able to adapt and understand others' perspectives (Aneas & Sandín, 2009). Communication without understanding different cultures can lead to conflicts or misunderstandings in work performance. Therefore, understanding related factors such as cross-cultural communication, technological competence, and cultural adaptation are important in order to increase work efficiency and create a good work atmosphere in organizations with employees from different cultures.

In today's digital age, technology has become an important tool for communication and collaboration within an organization, especially organizations with employees from various cultures. However, the quality of technology is also a key factor in communicating with employees effectively and smoothly. Considering the importance of cultural intelligence, which Wang and Goh (2020) pointed out as the ability to understand, adapt, and communicate better in a culturally diverse environment, employees can create more mutual understanding during work. If the organization chooses to use quality technology and supports cross-cultural communication, these technologies can act as a medium that allows employees to exchange information quickly and completely, reducing the chances of misunderstandings or ineffective communication. On the other hand, if the technology used is not appropriate or cannot flexibly meet the needs of employees, cultural challenges may increase, which is what Szkudlarek et al. (2020) identified as an obstacle to communication in an organization. Limited technology can hinder employees from accurately and completely conveying content. Therefore, choosing high-quality technology that can meet the needs of employees from different cultural backgrounds is the key to reducing communication problems and promoting effective collaboration.

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The research problem here focuses on the impact of Hofstede's cultural dimensions on communication between employees in a culturally diverse organization. These cultural differences can be barriers to communication and collaboration if not managed well. Cultural dimensions such as differences in power distance or individualism vs. collectivism can lead to employees having different perspectives and communication methods. Brett et al. (2020) pointed out that managing a team of employees from different cultures is more challenging when the technology used in the organization does not support effective cross-cultural communication. For instance, if the technology doesn't have features that make communication clear and easy to understand, or if it doesn't support language translation and showing cultural context, these technologies can get in the way of cross-cultural teams understanding each other and working together as much as possible. Meanwhile, Danso (2018) emphasizes the importance of building understanding of cultural diversity through technologies designed to enhance work in the organization. Quality technology that meets the needs of users from diverse backgrounds will help make collaboration more effective and reduce the chances of conflict or misunderstanding in the workplace. Therefore, managing and selecting appropriate technologies in a cross-cultural context is important for creating a positive atmosphere for collaboration.

Therefore, people want to know how Hofstede's cultural dimensions affect how well employees can communicate in businesses, especially in places where people from different cultures work together, which can be hard to do if it's not managed well. This research focuses on considering the mediating variable, the quality of communication technology, to assess how quality technology can support smooth cross-cultural communication. When organizations want to create an effective communication atmosphere in a diverse environment, selecting quality technology that can respond to the needs of employees from different cultures is important. This study expects to help organizations understand how to select appropriate technology, which can reduce communication limitations and increase collaboration efficiency. The findings from this study will help organizations design and use technology that effectively responds to cultural diversity, resulting in more effective communication and creating a strong and collaborative work atmosphere.

LITERATURE REVIEW

Cross-culture Culture Acceptance

Geert Hofstede's organizational culture theory is an important tool in studying the perception and management of cultural differences that affect behavior and communication within an organization. The theory has five main cultural dimensions: power distance, individualism/collectivism, gender equality, uncertainty avoidance, and foresight, which affect communication patterns in organizations with interactions between different cultures. Ghosh's (2011) study showed that high power distance in an organization results in a communication gap between employees and management, which can reduce communication effectiveness. Similarly, Yalın's (2017) study found that employees from different cultural backgrounds often have difficulty adjusting when working in organizations with different cultures, affecting overall cohesion and performance. However, Hofstede (2011) proposed that organizations can manage these differences by recognizing the levels of each dimension and developing strategies that are consistent with the cultural context. Other studies support Hofstede's proposal to use the theory to promote communication and performance in organizations. For example, Chang et al.'s (2016, 2020) study found that the levels of individualism and uncertainty avoidance in different countries, such as the United States and China, affected employees' willingness to share knowledge. This reflects the challenges of building collaboration in organizations with employees from different cultures. In addition, Alanezi and Alansari (2016) studied gender differences in Hofstede's dimensions in Kuwait, finding that men and women have different attitudes towards this cultural dimension, leading to suggestions for adjusting management styles that are appropriate for each gender. Meanwhile, Fatehi et al. (2020) proposed expanding the dimensions of individualism and collectivism horizontally and vertically, which allows organizations to better consider the complexity and cultural diversity within the organization.

Communication Technology Quality

Improving the quality of communication technology in organizations is a crucial issue for improving employee performance and satisfaction. Many studies have studied the key components that affect communication quality, including tangibles, reliability, user understanding, efficiency, privacy, and responsiveness. For example, the SERVQUAL model developed by Parasuraman et al. (1985) is an instrument used to measure service quality, divided into five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. The tangible dimension significantly contributes to user satisfaction in terms of technology accessibility and support within organizations. Fadilah and Handrianto's (2023) research shows that the availability of a helpdesk system enhances confidence in the quality of communication technology. In addition, devices and technologies that are placed in visible and easily accessible places help reduce the complexity of use and increase convenience for users, such as the work of Froehle and Roth (2004), who found that a system that allows users to access it readily increases the user experience and service quality. In addition, the reliability of communication technology is an important dimension that affects organizational satisfaction. Users should be able to check the accuracy and completeness of data sent through technology in order to build trust and confidence in the system. For example, Roses et al. (2009) found that the difference in how users and service providers see the quality of communication technology services can be narrowed by

making the technology more reliable and allowing for data traceability. In addition, understanding users is an important factor that helps communication technology meet user needs appropriately. Designing a user-friendly system, such as using easy-to-understand language and clear font colors, helps users use the system conveniently and can solve problems by themselves when problems occur. The research of Gupta and Chen (1995) found that quality management that takes into account the user experience and needs is very important in an environment that relies on communication technology in an organization. In terms of efficiency, Kim et al.'s (2011) research explored the impact of SaaS (Software as a Service) quality management and found that the efficiency of an organization's communication system helps employees achieve their communication goals and increase their job satisfaction. An efficient and error-free system ensures that messages are delivered to the recipients in full and without distortion. In terms of privacy, Reichl's (2007) research emphasized the importance of user privacy and data protection in communication technology systems, especially in the digital age where access to data can be easily intruded. Having secure access protection systems, such as individual passwords and user-controllable privacy settings, is important to increase trust and confidence in the organization's system. In terms of user responsiveness, Park et al.'s (2014) research found that having communication that responds to users' needs in a timely manner is an important factor in increasing satisfaction with using communication technology in an organization. Effective customer service support and readiness to solve users' problems make communication technology systems more useful. In addition, training users is another element that helps increase skills and confidence in using them. Virima et al.'s (2019) research stated that organizations that organize training on the use of communication systems can effectively meet the needs and increase user satisfaction.

Cross-Cultural Communication Performance

Developing cross-cultural communication skills in organizations is an important issue that helps employees work effectively in a multicultural environment, which is a challenge for organizations in the era of globalization. Research in this area has addressed the development of foreign language skills in the context of intercultural collaboration, confirming that listening, speaking, reading, and writing skills are important factors that help employees communicate with colleagues from other countries with deep understanding. The research of Gilleard and Gilleard (2002) showed that developing these communication skills allows employees to better adapt to a multicultural environment. In addition, a study by Presbitero (2020) found that in a team working through virtual channels, employees' language skills and cultural competence facilitate clear communication and reduce anxiety from using foreign languages, which will result in higher employee performance and enhance teamwork in a multicultural organization. In addition to foreign language skills, developing communication skills in organizations plays an important role in creating an effective work atmosphere. The research of Rahmawati (2023) stated that clear communication, choosing the right communication channels, and understanding the cultural differences of colleagues are important factors in building good relationships between people in the organization. Similarly, the research of Cam and Minakova (2022) emphasized the importance of cross-cultural communication training. Such training not only enhances knowledge and understanding of different cultures, but also develops skills in selecting communication tools and ensuring the delivery of accurate information in a cross-cultural context. Masterson's (2020) research on communication technology says that using digital technology to encourage intercultural learning in the classroom can also be used in organizations to help people be more flexible when using technology for interpersonal communication and to help solve problems that come up because of misunderstandings in technologies that work together. Solodkova and Ismagilova's (2016) research also suggests that dynamic learning environments improve technology and communication skills in cross-cultural settings. These are important factors for improving work effectiveness and the ability to adapt to work in culturally diverse settings.

Hypothesis Development and Conceptual Framework

Past studies have found that intercultural communication is complex and directly affected by global cultural dimensions such as power distance and individualism (Altaf, 2011), indicating that

pronounced cultural differences make it harder to understand and adapt to communication in a diverse society and may lead to misunderstandings or conflicts in organizations (Aneas & Sandín, 2009). In addition, Wei (2024) pointed out that cross-cultural management in organizations requires the development of employees' cultural competence and training to recognize and adapt to working across cultures, which results in employees being able to develop better skills in recognizing the cultures of others, promoting mutual understanding, and reducing conflicts between employees from different cultures. Therefore, it can be hypothesized that H1: Cross-culture acceptance has an impact on cross-cultural communication performance. In addition, many studies have shown that cultural values influence the acceptance and satisfaction of communication technologies in organizations (Sunny et al., 2019), with cultural dimensions such as power distance and uncertainty avoidance. This may affect how the trustworthiness of technology is perceived (Szkudlarek et al., 2020), which in some cases can lead employees in cultures with high power distance to be more cautious about using technology. The work of Brett, Behfar, and Kern (2020) also indicates that cultural differences result in a variety of abilities and skills required to use communication technologies within an organization. The research of Danso (2018) emphasizes the need to develop cultural competence to reduce differences in attitudes and skills in using technology in diverse environments, which will improve cross-cultural work efficiency. The hypothesis can be written as H2: Cross-culture has an impact on communication technology quality. Furthermore, research has shown a relationship between the quality of communication technology and cross-cultural communication efficiency, stating that the quality of communication technology directly affects employees' ability to communicate effectively in cross-cultural contexts. The study by Cam and Minakova (2022) supports this hypothesis, showing that training in intercultural communication using technology can enhance employees' communication skills. In addition, Masterson (2020) demonstrates the use of digital technology in the classroom to develop cross-cultural communication skills, demonstrating that enhancing technology skills can enhance cross-cultural communication. This can be hypothesized as H3: Communication technology quality has an impact on cross-cultural communication performance. Finally, Altaf's (2011) research suggests that cross-cultural adoption may not fully enhance cross-cultural communication effectiveness if there is no technology that supports quality communication. The reason is that quality communication technology will help promote cultural adaptation and more effective communication in an organization. This is consistent with the findings of Fu and Hwang (2018), who showed that the use of modern technology in a cross-cultural communication context can enhance important communication skills in employees and enable them to communicate more effectively in situations where different cultures mix. From here, the hypothesis can be written as H4: Communication technology quality mediates the relationship between cross-culture and cross-cultural communication performance, which is shown in the figure below.

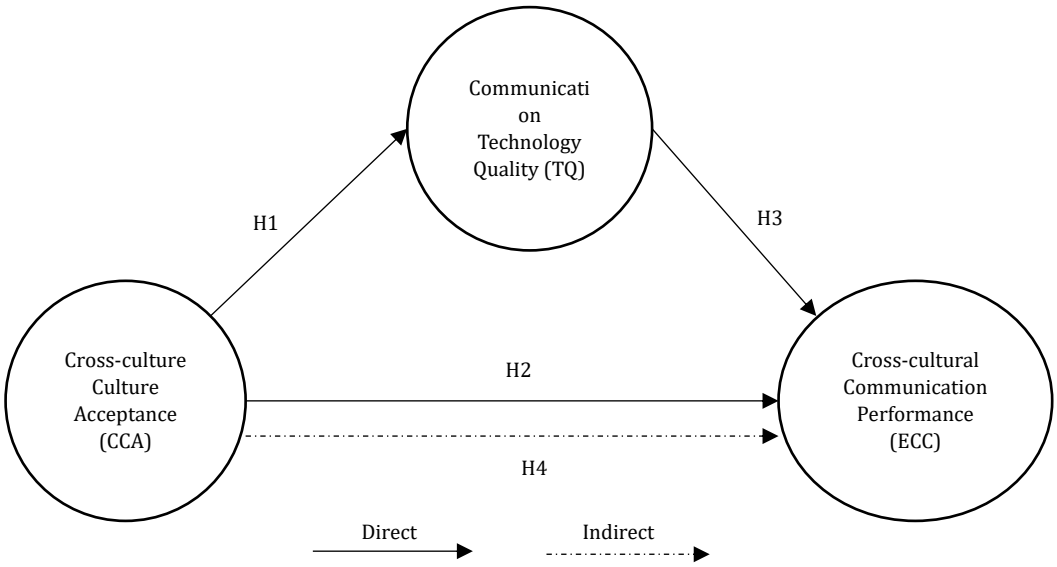

Figure 1. Research framework

METHODOLOGY

This research methodology focuses on studying the effectiveness of cross-cultural communication among employees in the smart electronic industry, which focuses on employees working in an environment with cultural exchange and a variety of foreign language communication skills. In order to obtain high-quality data for analysis and hypothesis testing in this research, the study defined the population and sample by considering Cochran's (1977) formula to find a sample size sufficient for analysis without having to know the total population. The Cochran formula was used to calculate the sample size for a large and unknown population, resulting in a basic sample size of 384 people. However, to prevent the risk of missing or incomplete data, 16 additional people were collected, resulting in a total sample size of 400 people in this study, which is sufficient to test the hypothesis with sophisticated and reliable statistical analysis. The sampling method in this research was simple random sampling, which is convenient. This method has the advantage of being easy to access respondents and saving time. Although it does not use a complicated random sampling process, the sufficient sample size calculated by Cochran and systematic convenience sampling make the data suitable for analysis and interpretation. Data collection for this research was conducted through a questionnaire designed to reflect the skills required for communication and technology use in a cross-cultural context, including acceptance and adaptation to foreign cultures. The questionnaire was developed to enable employees to reflect on their views on workplace communication skills, foreign language skills, and use of technology for communication.

In measuring the level of cross-culture culture acceptance according to Hofstede's dimensions, the focus is on measuring variables that reflect attitudes and acceptance of different cultural aspects. The main variables measured include power distance, individualism/collectivism, masculinity/femininity, uncertainty avoidance, and long-term/short-term orientation. The instrument used to measure these variables is a questionnaire that uses a 5-point Likert Scale (1 = least to 5 = most) that asks respondents to rate their level of opinion. For example, a statement used in the variable “Power Distance” might be “Do you agree that some cultures are divided into social classes” or “Do you agree that the power of employees in the organization is different?”. As for the variable “Individualism/Collectivism”, the question might be “Do you agree that each culture values interpersonal relationships in society differently?” or “Do you agree that each culture values honesty?” Loyalty and mutual assistance are different.” For the “Masculinity/Femininity” dimension, it can be measured by asking “Do you agree that different cultures place different importance on gender equality?” or “Do you agree that different cultures clearly distinguish gender roles?” For Uncertainty Avoidance, it can be measured by asking “Do you agree that different cultures have different levels of uncertainty avoidance?” or “Do you agree that events affect decision-making differently?” And Long-term/Short-term Orientation can be measured by asking “Do you agree that different cultures place different importance on short-term and long-term planning?” or “Do you agree that different cultures value the length of time for activities?”

The measurement of communication technology quality consisted of measuring variables that reflect the service provision and characteristics of the technology system used in the organization, including tangibility, reliability, empathy, privacy and responsiveness. The questionnaire instrument was scored according to the level of opinion on a 5-level Likert scale (1 = least to 5 = most). The tangibility dimension of service assessed the accessibility and clarity of the technology service, for example, "You can easily access the use of communication technology in the organization" and "The communication technology devices in the organization are clearly visible." Measuring in this dimension helps to determine the ease of use and access to technology services, while the reliability dimension measures the confidence in the use and reliability of the system, such as “The organization’s communication technology provides reliable communication results” and “The data transmitted through the organization’s communication technology can be traced”. In addition, the empathy dimension focuses on the user’s understanding and use, such as “The organization’s communication technology is user-friendly” and “The organization’s communication technology system is not complicated or difficult to understand”. Meanwhile, the privacy dimension measures the level of protection of personal data, such as “The organization’s

communication technology respects privacy" and "The data contained in the organization's communication technology is confidential". Finally, the responsiveness dimension assesses the organization's responsiveness and support, such as "The organization provides an organization's communication technology system that is ready to use" and "The organization can promptly respond to the needs of technology users".

The measurement of cross-cultural communication performance in organizations focuses on assessing variables that reflect communication skills required in a multicultural environment, including foreign language communication skill in the organization, communication skill in the organization, and technology usage skill for communication. The instrument used is a 5-point Likert scale questionnaire (1 = least to 5 = most). In the foreign language communication skill dimension, the ability to listen, speak, read, and write in a foreign language for communication in the organization is measured. Examples of questions used in the measurement are, "You have better skills in listening and understanding foreign languages at work" and "You have better skills in speaking and understanding foreign languages at work." In addition, the communication skill in the organization dimension measures the clarity and selection of appropriate communication channels, as well as the understanding of cultural differences. Examples of questions used in the measurement are, "You can thoroughly communicate work performance information to your colleagues" and "The content of your messages is clear." Finally, the technology usage skill for communication dimension assesses the ability to use and adapt to communication technologies in the organization. Examples of measurement sentences include "You can solve problems when communication technology is problematic" and "You learn and adapt when using communication technology."

The questionnaire was statistically tested for quality and has high reliability. The Cronbach's Alpha value is more than 0.70, which is a generally accepted standard for measuring the internal consistency of the questionnaire. The data collection was conducted within the specified time frame and the questionnaires were delivered to the factory employees through appropriate channels, making the data collection comprehensive and to the point. The collected data will help the researcher analyze the employees' skills and adaptations in cross-cultural communication and the use of technology in collaboration. The analysis of the obtained data used the Structural Equation Modeling (SEM) technique, which is a popular tool for path analysis and structural impact analysis in large data. This program can process data quickly and accurately, suitable for testing hypotheses and analyzing the relationship between independent variables, dependent variables, and variables that act as mediators.

RESULTS

Profile of the Respondents

Table 1. Profile of the Respondents

Personal Information	List	Person (s)	Percentage (%)
Gender	Male	168	42.0
	Female	232	58.0
Age	Below 20 years old	10	2.5
	Between 21 – 30 years old	162	40.5
	Between 31 - 40 years old	158	39.5
	Between 41 – 50 years old	60	15.0
	Above 50 years old	10	2.5
Education	Below bachelor's degree	12	3.0
	Bachelor's degree	345	86.3
	Master's degree	39	9.8
	Above master's degree	4	1.0
Working Experience	Below 1 year	20	5.0
	Between 1 - 2 years	55	13.8
	Between 3 - 5 years	114	28.5
	Above 5 years	211	52.8

Table 1. (Cont.)

Personal Information	List	Person (s)	Percentage (%)
Position	Executive/Manager	6	1.5
	Division/ Depart Head	56	14.0
	Operational staff	338	84.5
Company Size	Below 50 persons	43	10.8
	Between 51-200 persons	190	47.5
	Above 200 persons	167	41.8

From Table 1, it was found that the respondents were more female than male (58.0% female and 42.0% male). In terms of age, most were between 21-30 years old (40.5%) and 31-40 years old (39.5%), reflecting mainly young employees. In terms of education, the majority of respondents had a bachelor's degree (86.3%) and a minority had a higher education than a bachelor's degree. The analysis of work experience found that more than half of the respondents had more than 5 years of working experience (52.8%), with the majority of respondents being operational-level employees (84.5%) and a minority being executives or department heads. The size of the companies the respondents worked for was mostly medium-sized organizations (51-200 people, 47.5%) and large organizations (more than 200 people, 41.8%), reflecting a sample group with diversity in terms of job positions and organization sizes, which can provide a complete and appropriate overview of the employee group for the research.

Analysis of Cross-culture Culture Acceptance, Communication Technology Quality, Cross-cultural Communication Performance

Table 2. Analysis of Cross-culture Culture Acceptance, Communication Technology Quality, Cross-cultural Communication Performance

Factor	Mean	S.D.	%CV	Kurtosis	Skewness
Cross-culture Culture Acceptance (CCA)					
Individualism/Collectivism (INV)	3.590	0.956	26.630	-0.289	-0.772
Long-term/Short-term Orientation (LTO)	4.192	0.730	17.414	1.701	-1.344
Masculinity/Femininity (MAS)	2.910	0.814	27.973	0.177	-0.292
Power Distance (PDI)	3.685	0.712	19.322	1.155	-0.741
Uncertainty Avoidance (UAI)	3.760	0.727	19.335	-0.048	-0.583
Communication Technology Quality (TQ)					
Empathy (EMPH)	4.372	0.441	10.087	0.217	-0.660
Privacy (PERS)	4.536	0.474	10.450	0.832	-1.105
Reliability (RELI)	4.458	0.435	9.758	0.042	-0.664
Tangibility (TANG)	4.445	0.481	10.821	0.750	-0.911
Responsiveness (TECP)	4.294	0.458	10.666	-0.186	-0.365
Cross-cultural Communication Performance (ECC)					
Communication skill in the organization (C_SKL)	4.323	0.452	10.456	0.393	-0.795
Foreign language communication skill (L_SKL)	4.354	0.708	16.261	1.290	-1.208
Technology usage skill for communication (T_SKL)	4.276	0.59	13.798	-0.728	-0.411

From Table 2, it was found that the Long-term/Short-term Orientation (LTO) dimensions had the highest mean value of 4.192 and the lowest %CV of 17.414, reflecting that the respondents gave great importance to foresight and long-term goal setting. The Uncertainty Avoidance (UAI) and Power Distance (PDI) dimensions had relatively high mean values of 3.76 and 3.685, respectively,

indicating openness to uncertainty and acceptance of power differences in the organization. The Masculinity/Femininity (MAS) dimension had the lowest mean value of 2.91 and the highest %CV of 27.973, indicating that the respondents tend to place lower importance on gender equality than the other dimensions. For the quality of communication technology, the Privacy (PERS) factor had the highest mean value of 4.536 and the lowest %CV of 10.450, indicating the importance that the respondents placed on protecting personal data in communication. The Reliability (RELI) and Empathy (EMPH) factors had similar means of 4.458 and 4.372, respectively, indicating the importance placed on credibility and understanding others' perspectives. For cross-cultural communication effectiveness, the organizational communication skills (C_SKL) and foreign language communication skills (L_SKL) factors had the highest mean scores of 4.323 and 4.354, respectively, reflecting that employees value these skills in working with people from diverse cultures. The technology use in communication factor (T_SKL) had a mean score of 4.276, which was also high, indicating that technology use skills are important in supporting communication in a cross-cultural environment.

Model Development, Convergent Validity and Discriminant Validity

Through model development, convergent validity is used to examine how closely the new scale is connected to other variables and other measures of the same construct, whereas discriminant validity is used to determine if measurements are not meant to be much related. All data are shown in Table 3 and 4.

Table 3. Confirmatory Factor Analysis

Factor	Measure	Factor Loading	t-value	rho_c	rho_a	AVE	α
Cross-culture Culture Acceptance (CCA)	INV	0.760	19.886	0.836	0.777	0.511	0.751
	LTO	0.817	28.799				
	MAS	0.526	7.900				
	PDI	0.610	10.328				
	UAI	0.813	29.444				
Communication Technology Quality (TQ)	EMPH	0.867	59.806	0.919	0.895	0.696	0.889
	PERS	0.719	22.185				
	RELI	0.858	56.259				
	TANG	0.857	51.080				
	TECP	0.861	61.717				
Cross-cultural Communication Performance (ECC)	C_SKL	0.903	94.823	0.927	0.885	0.809	0.882
	L_SKL	0.894	74.559				
	T_SKL	0.902	101.873				

From Table 3, it was found that each indicator, such as Individualism/Collectivism (INV), Long-term/Short-term Orientation (LTO), Masculinity/Femininity (MAS), Power Distance (PDI), and Uncertainty Avoidance (UAI), had Factor Loading values between 0.526 and 0.817, which indicated a wide range of relationships with the CCA factors, especially the LTO and UAI indicators, which had Factor Loading values higher than the 0.7 criterion, resulting in an AVE of 0.511 and a Cronbach's alpha (α) value of 0.751, indicating moderate reliability. For the TQ factors consisting of Empathy (EMPH), Privacy (PERS), Reliability (RELI), Tangibility (TANG), and Responsiveness (TECP), it was found that each indicator had Factor Loading values higher than the 0.7 criterion, especially EMPH, RELI, TANG, and TECP, which had Factor Loading values higher than 0.85, resulting in an AVE value. equal to 0.696 and α value equal to 0.889, which indicates high internal consistency and high reliability of the TQ factor measure. For the ECC factor, which consists of Communication skill in the organization (C_SKL), Foreign language communication skill (L_SKL), and Technology usage skill for communication (T_SKL), all indicators have Factor Loading values higher than 0.85, with an AVE value equal to 0.809 and an α value equal to 0.882,

which indicates high consistency and reliability of the ECC factor. In summary, all indicators have sufficient quality to be used in testing the hypothesis because the statistical values support the reliability and validity of the model.

Table 4. Discriminant validity by Fornell-Larcker Criterion

Variables	CCA	TQ	ECC
Cross-culture Culture Acceptance (CCA)	**0.715**		
Communication Technology Quality (TQ)	0.262	**0.900**	
Cross-cultural Communication Performance (ECC)	0.316	0.752	**0.834**

The bold number in the diagonal line is the square root of AVE

From Table 4, it shows the discriminant validity analysis using the Fornell-Larcker criterion, which is used to measure the differences between the main variables: Cross-culture Culture Acceptance (CCA), Communication Technology Quality (TQ), and Cross-cultural Communication Performance (ECC). The discriminant validity is measured by the square root mean of the AVE (diagonal figure). The square root mean of the AVE for CCA, TQ, and ECC are 0.715, 0.900, and 0.834, respectively, which are higher than the correlation values between other related variables, such as the correlation between CCA and TQ of 0.262 and between TQ and ECC of 0.752, indicating that each variable has clear differences and can be distinguished from each other. This difference confirms that these variables have high discriminant validity, which is an important indicator to assess the reliability of the analytical model.

Finalized Model and Hypothesis Analysis

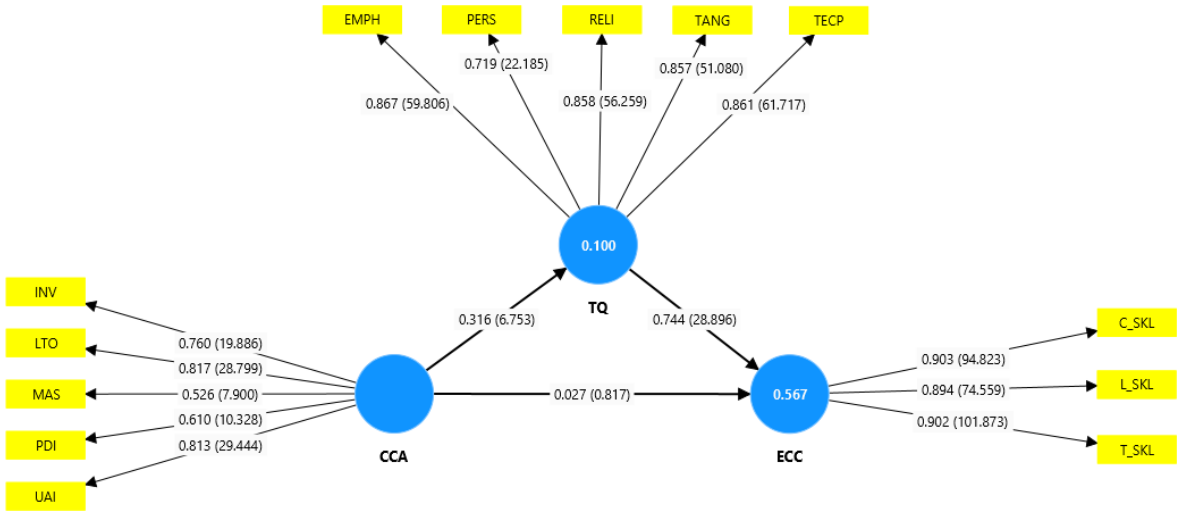

Figure 2. Finalized Model
Note: CCA, Cross-culture Culture Acceptance; TQ, Communication Technology Quality; ECC, Cross-cultural Communication Performance

Table 5. Hypothesis Analysis

Hypothesis	Standardized Estimates	t-value	*p*-values	Result
H1: CCA -> ECC	0.027	0.817	0.414	Reject
H2: CCA -> TQ	0.316	6.753	0.000	Accept
H3: TQ -> ECC	0.744	28.896	0.000	Accept
H4: CCA -> TQ -> ECC	0.235	6.286	0.000	Accept

Note: CCA, Cross-culture Culture Acceptance; TQ, Communication Technology Quality; ECC, Cross-cultural Communication Performance

From Table 5, it was found that the hypothesis H1 that stated that cross-cultural acceptance (CCA) affects cross-cultural communication effectiveness (ECC) was rejected because the t-value was equal to 0.817 and the P-value was equal to 0.414, which were higher than the specified significance level. However, the hypothesis H2 was accepted with a t-value of 6.753 and a *p*-value lower than 0.001, indicating that CCA has a positive and significant effect on communication technology quality (TQ). Similarly, the hypothesis H3 that stated TQ affects ECC was accepted with a t-value as high as 28.896, indicating a significantly positive relationship. In addition, the hypothesis H4 that stated TQ acted as a mediator between CCA and ECC was also accepted with a t-value of 6.286 and a *p*-value lower than 0.001. These results concluded that although CCA did not directly affect ECC, when TQ acted as a mediator, it would have a positive effect and enhance cross-cultural communication effectiveness.

Table 6. Direct Effect, Indirect Effect, Total Effect

Variables	TQ			ECC		
	Direct	**Indirect**	**Total**	**Direct**	**Indirect**	**Total**
CCA	0.316***	-	0.316***	0.027	0.235***	0.267***
TQ				0.744***	-	0.744***

Note: CCA, Cross-culture Culture Acceptance; TQ, Communication Technology Quality; ECC, Cross-cultural Communication Performance

From Table 6, it was found that CCA had a direct influence on TQ of 0.316, which was significant at the 0.001 level. The total influence between CCA and TQ was 0.316, indicating a positive and significant relationship between these two variables. However, CCA had a very small direct influence on ECC (0.027) and was not significant. On the other hand, CCA had an indirect influence on ECC through the TQ variable with a value of 0.235, which was significant, and increased the total influence between CCA and ECC to 0.267. This indicates that TQ plays an important mediating role in transmitting the influence from CCA to ECC. TQ itself had a direct influence on ECC of 0.744, which was the highest and most significant, indicating the importance of the quality of communication technology to cross-cultural communication effectiveness. In conclusion, TQ is an important variable linking between cross-cultural acceptance and cross-cultural communication effectiveness.

DISCUSSION AND IMPLICATIONS

Studies on the effects of cross-cultural communication and the quality of communication technology on communication effectiveness suggest that accepting cultural diversity may not directly affect communication effectiveness in culturally diverse organizations. However, further studies indicate that important contextual factors, such as the quality of communication technology used in organizations, play an important role in mediating the relationship between cross-cultural acceptance and communication effectiveness. Hofstede's (2011) research, which describes various cultural dimensions such as power distance and individualism, found that these differences affect communication behavior and adaptation in organizations (Ghosh, 2011). Although accepting cultural diversity can help create a climate that supports communication within organizations, Wei's (2024) study found that accepting these differences may not directly affect communication effectiveness, but other supporting factors such as cultural intelligence and effective technology are needed to help employees understand and communicate with others in the organization from different cultural backgrounds (Wang & Goh, 2020). In addition, research shows the importance of developing high-quality communication technology in organizations to enable employees of different cultures to communicate and adapt better. The use of high-quality technology with adequate features can help facilitate clear communication and reduce the chances of misunderstandings. Fadilah and Handrianto's (2023) research suggest that the quality of technology plays a key role in increasing trust and reducing the complexity of using technology in communication. In this regard, organizations should have easily visible and accessible help

systems or devices, such as helpdesks, that respond to user needs quickly and efficiently (Froehle & Roth, 2004). The study of Roses et al. (2009) also emphasizes the importance of trust in communication technologies, as the ability to trace data and accuracy of information builds trust in the system and promotes communication efficiency in an organization. Finally, the quality of technology also plays an important role in the link between cross-cultural acceptance and communication efficiency. Research has found that the availability and efficiency of technology can effectively reduce the challenges of cultural differences and enhance employee adaptation (Fu & Hwang, 2018). Choosing technologies that support multilingual communication, or those designed to be easy to use in cross-cultural contexts, can significantly reduce the problems caused by cultural diversity. Solodkova and Ismagilova's (2016) research emphasizes flexible learning environments that can adapt to the needs of users from different cultures, allowing employees to learn new skills and adapt to technology appropriately. This technology enables employees from diverse cultural backgrounds to communicate effectively in an organizational context.

For practical implications, this study shows that to enhance cross-cultural communication in organizations, especially in highly culturally diverse contexts, investing in quality communication technologies that can meet the diverse needs of employees is an important factor. Organizations should consider adopting accessible and convenient technologies, such as user support systems and instant help channels in case of problems. These technologies should be designed to support multilingual communication, which will help narrow the cultural gap and reduce the chances of misunderstandings between employees from different cultural backgrounds. In addition, training to develop cultural understanding should be part of organizational development. Organizations can consider providing training to develop cultural intelligence and the ability to adapt to communication technologies in a cross-cultural context to reduce conflict and create a strong and collaborative work environment. Creating a skill development plan for using technology together with promoting cross-cultural understanding and acceptance in the organization will help employees communicate effectively and better meet the needs of customers from diverse backgrounds.

For academic implications, this study expands the scope of knowledge on organizational culture management, especially by using Hofstede's theory to analyze the relationship between cross-cultural acceptance, the quality of communication technology, and cross-cultural communication effectiveness. The finding that communication technology plays an important mediating variable in the relationship between cross-cultural acceptance and cross-cultural communication effectiveness allows us to see the importance of investing in technologies that can reduce the complexity of cultural issues within organizations. This research also supports the idea that the quality of communication technology plays a role in enhancing cooperation and reducing conflicts among employees from different cultures, which is consistent with the ideas from the work of Cam and Minakova (2022) and Fu and Hwang (2018) who stated that technology can be an important tool in creating communication effectiveness in culturally diverse organizations. In addition, this study can provide opportunities for researchers to further study the development of technology management strategies to support communication in cross-cultural contexts and develop new dimensions in evaluating the quality of communication technology in organizations.

LIMITATIONS AND FUTURE RESEARCH POSSIBILITIES

This study has limitations that should be considered in interpreting the results and applying them. One of the main limitations is that the data were collected in the specific context of the smart electronics manufacturing industry, which has a group of employees from various cultures. Therefore, the results may not be able to comprehensively reflect organizations in other industries with different work styles or technology use. In addition, the measurement of cross-culture culture acceptance and communication technology quality used a questionnaire and a Likert scale assessment, which may lead to bias in the respondents' responses because the respondents' personal perceptions may affect the assessment. In addition, the use of a questionnaire may not be able to explore the deep factors that may affect cultural acceptance and communication quality, such as emotional factors, attitudes toward different cultures, and

previous work experiences. In the future, the study should be expanded to select a wider sample group, including organizations from other industries that use different forms of communication technology, such as the service, finance, and information technology industries, which will help to gain a more comprehensive understanding of the role of cross-culture acceptance and communication quality in the context of different industries. In addition, the research should consider using a mixed-method research method, including interviews or qualitative analysis, to explore in-depth perspectives on cultural acceptance and factors affecting the use of communication technology in organizations with different cultures. Experimental studies may be another method that can be used to directly study the impact of cultural acceptance training and technology use on cross-cultural communication effectiveness. Finally, future research may focus on developing new dimensions to measure the quality of communication technology that are consistent with the development of modern technologies such as artificial intelligence (AI) and virtual communication, which affect the adaptation and creation of a climate friendly to cultural diversity in organizations.

CONCLUSION

This study emphasizes the important role of cultural acceptance and the quality of communication technology in enhancing the effectiveness of cross-cultural communication in organizations with employees from various cultures. The results indicate that cultural acceptance alone may not have a direct effect on the effectiveness of cross-cultural communication, but the quality of communication technology plays an important role as a mediator between cultural acceptance and effective communication, which can reduce the chance of misunderstanding and enhance cooperation in organizations with various cultures. The significance of this research lies in the discovery of the quality of communication technology as an important mediator that supports cross-cultural communication in organizations, which expands the knowledge of organizational culture management. In addition, it emphasizes the importance of investing in developing technologies that meet the needs of culturally diverse environments. This study contributes to the understanding of cross-cultural communication management and offers guidelines for organizations to promote effective communication in diverse contexts.

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CONFLICTS OF INTEREST

The author declares that there are no conflicts of interest found in this research.

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