

## *Fostering Intercultural Competence Through Virtual Exchange in Japanese Higher Education*

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### **Abstract**

This research project investigates the experiences of Japanese university students who participate in virtual exchange programs and how students' intercultural competence enhances after the participation of a program. Intercultural competence is emerging as a significant educational skill in Japanese higher education, yet most intercultural competence frameworks have been developed by Western scholars with Western perspectives and often do not include other cultural views of intercultural competence. Moreover, intercultural competence frameworks have been designed on an assumption that interactions are carried out in physical contexts and do not yet appear to have been applied to online context. This research project, therefore, aims to examine the potentials of “virtual exchanges” to support the development of intercultural competence focusing on Japanese university students. The key research design tools are a self-inventory assessment, the Cultural Intelligence Scale (CQS) and semi-structured interviews. The results of CQS are processed with SPSS and conducted statistical analysis of paired data. Interview data is used for inductive thematic analysis. Both quantitative and qualitative data are then cross analysed. This paper will showcase preliminary results gained from a virtual exchange program, IVEProject. Statistical analysis from pre-and post-survey showed that among four capabilities from CQS - metacognitive, cognitive, behavioural, and motivational - the cognitive capability showed the most significant change. Based on qualitative data, some significance themes were identified which are often not prioritised in the dominant intercultural competence frameworks. Although further analysis is required to substantiate findings from surveys and interviews, the data revealed that virtual exchange experiences had a positive impact on students' development of intercultural competence.

Keywords: Intercultural Competence, Virtual Exchange, Japanese Higher Education



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## **Introduction**

This research project investigated the experiences of Japanese university students who participate in a virtual exchange program and examined the changes of their intercultural competence. As employment opportunities are globalised, developing intercultural competence is viewed as a vital component that a 21<sup>st</sup> century education ought to provide (Bennet, 1986; Byram, 1996; Deardorff, 2006; Ting-Toomey & Kurogi, 1998). To date, the development of the theoretical concept has led to various definitions of intercultural competence that have emerged in the field. In this study, three key frameworks are employed: 1) Byram's (1997) Intercultural Competence (ICC) model; 2) Deardorff's (2006) Pyramid and Process models; and 3) Earley and Ang's (2003) Cultural Intelligence model. These frameworks have been identified as influential models of intercultural communication in teaching and learning.

However, most intercultural competence frameworks have been developed by Western scholars, are based on Western perspectives, and often do not include other cultural views of intercultural competence (Dalib et al., 2014; Deardorff, 2004; Parmenter, 2003). Scholarly work on intercultural competence in a Japanese context continues to rely on Western conceptualizations that have been adopted in foreign language education (Deacon & Richard, 2022; Yashima, 2009). Moreover, intercultural competence frameworks have been designed on an assumption that interactions are carried out in physical contexts and as of yet do not appear to have been applied to online contexts.

The expansion of technologies is facilitating "virtual exchange," referring to the engagement of individuals and/or groups of learners in online interactions. Virtual exchange has increasingly become the focus of research attention among those interested in foreign language education and intercultural understanding (Lewis & O'Dowd, 2016). Many scholars advocate for virtual exchange as a powerful tool for developing intercultural competence (Belz, 2003; Dooly & Vinagre, 2022; Hagley, 2020; Lewis & O'Dowd, 2016; White et al., 2021; among others). For example, O'Dowd (2021) reports the various positive outcomes of virtual exchange such as improvement in foreign language abilities, flexibility, problem-solving skills, and digital literacy, which are very relevant for modern society. This study, therefore, aims to examine the potentials of "virtual exchanges" to support the development of intercultural competence focusing on the Japanese university students. This study will expand our understanding of how intercultural competence is manifested and developed in online contexts while questioning whether the predominantly Western conceptualisation of intercultural competence that has been adopted in foreign language education are appropriate for Japanese contexts.

## **Methodology**

### **Participants**

The participants of this study are Japanese university students, who are currently enrolled in 4-year universities in Japan and who participated in the International Virtual Exchange Project (IVEProject) from May 2023 to June 2023. The IVEProject is an online platform for virtual exchange, where students interact based on the discussion topics provided (e.g., self-introduction, about my hometown, events in our lives, etc.). The significant feature of this project is its diversity of participants' cultural background. To date, students from 15 different

countries on average have participated in each 8-week programs. This cultural diversity allows for participants' authentic interactions using English as Lingua Franca (ELF).

## **Data Collection**

This study adopted a mixed-method approach. While acknowledging the difficulty and complexity of measuring intercultural competence, Deardroff (2006) notes that evaluating intercultural competence through a mixed-method qualitative and quantitative format is preferable. This study used Earley and Ang's (2003) Cultural Intelligence Scale (CQS), a self-inventory instrument, to comprehend how participants' intercultural competence shifts over time. CQS includes a 20-item questionnaire based on a 7-point Likert scale from strongly agree to strongly disagree to rate the participants' answers to the 20 statements. Each one-item scale gauges a metacognitive, cognitive, motivational, and behavioural description of the participants. Before engaging in the IVEProject, the participants were asked to complete the pre-survey, and those who completed the pre-survey were asked to complete the post-survey again at the end of the IVEProject. In addition to the questionnaire, this study also used semi-structured interviews to explore in-depth data of participants' virtual exchange experiences, and to investigate their perceptions of intercultural competence. Individuals who successfully completed both pre- and post surveys and expressed their willingness to participate were invited to the interview phase (n. 7). The interviews were conducted in Japanese either in person or via Zoom for no more than 60 minutes and all interviews were recorded and transcribed. The interview data were exported to NVivo 14. At this point, the coding was conducted without translating into English. The translation of the data to English occurred after the completion of the coding process in its first stage. In the interviews, CQS results were used as prompts to guide the conversation. Questions prompts were employed with questions referring to *Autobiography of Intercultural Encounters (AIE)* (Byram, 1997). This approach allowed the respondents to have an opportunity to learn about themselves and their own way of thinking (Matsumoto, 2020).

## **Results and Discussion**

### **Quantitative Findings**

I statistically compared the pre- and post CQS results of the IVEProject. 109 students filled in the pre-CQS, and 26 students filled in the post-CQS. Three students were excluded from the analysis as their emails appeared to be duplicated. This resulted in a final sample of 23 participants who filled in the pre- and post CQS.

For statistical analysis, I transformed the 7-point Likert-scale data into numerical values 1-7 followed by calculating the means of each dimension: metacognitive, cognitive, motivational, and behavioural. I then processed the mean scores in SPSS statistics and performed the paired-samples t-test. While the sample size may appear relatively small for conducting the paired-sample t test, it is sufficiently robust to undertake the test effectively. The results of the findings are summarised in Table 1 and 2.

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_MC	4.9601	23	.95077	.19825
	Post_MC	5.2935	23	.81761	.17048
Pair 2	Pre_COG	4.9601	23	.95077	.19825
	Post_COG	3.9203	23	.98840	.20610
Pair 3	Pre_MOT	4.4696	23	1.07806	.22479
	Post_MOT	4.6000	23	1.34840	.28116
Pair 4	Pre_BEH	5.4174	23	1.14877	.23954
	Post_BEH	5.3130	23	1.14547	.23885

Table1: The results of the paired samples statistics

		Paired Differences					t	df	Significance	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	Pre_MC - Post_MC	-.33333	.92147	.19214	-.73181	.06514	-1.735	22	.048	.097
Pair 2	Pre_COG - Post_COG	1.03986	1.05405	.21979	.58405	1.49566	4.731	22	<.001	<.001
Pair 3	Pre_MOT - Post_MOT	-.13043	.90776	.18928	-.52298	.26211	-.689	22	.249	.498
Pair 4	Pre_BEH - Post_BEH	.10435	.51476	.10734	-.11825	.32695	.972	22	.171	.342

Table 2: The results of the paired samples test

A comparison between pre (T1) and post (T2) CQ mean scores is presented in Table 1. MC represents metacognitive CQ, COG represents cognitive CQ, MOT represents motivational CQ and BEH represents behavioural CQ. The results indicated the changes noted in each CQ dimension. As shown in Table 1, Cognitive dimension showed the most significant change (-20.9%) followed by - in diminishing ranking order - metacognitive, (6.7%), behavioural (-1.9%), motivational (2.9%) dimensions.

I conducted a paired-samples t-test to determine the significance of the changes for each of the CQ dimensions. The results of paired samples t-test are summarised in Table 2. The results obtained for this group (n=23) were as follows: (1) Metacognitive changes were *not significant* at  $p = 0.97$ , with the value of  $t = -1.735$ ; (2) Cognitive changes were *significant* at  $p < 0.01$ , with the value of  $t = 4.731$ ; (3) Motivational changes were *not significant* at  $p = 4.98$ , with the value of  $t = -0.689$ ; (4) Behavioural changes were *not significant* at  $p = 0.342$ , with the value of  $t = 0.6$ .

Among all four CQ, significant change was detected in cognitive CQ. Cognitive CQ refers to knowledge about various cultures and cultural differences including both general cultural knowledge on cultural issues and specific knowledge about certain cultures. This result can be interpreted as signifying that the individuals experienced a form of cognitive dissonance, a discrepancy between one's beliefs, attitudes, or experiences through interaction in the virtual exchange. In this case it can be explained that these students initially believed they had sufficient culture-general knowledge, or context specific knowledge but the online interactions uncovered a gap or inconsistency in their understanding. By reflecting on online interactions, students noticed the discrepancy which can be a valuable part of intercultural competence development. These results indicated that virtual exchange provides some encouraging impact on the participants' cognitive dimension of intercultural competence.

## Qualitative Findings

For qualitative data, this research adopted inductive thematic analysis. In the field of intercultural competence, as there is an abundance of prior research and existing models, employing deductive perspectives from previous studies is essential. However, there is a possibility of presenting a unique perspective that has not been included in the existing models. Hence, this study employed an inductive analysis to capture newly emerging perspectives that may have been overlooked. Drawing from the existing models, knowledge, skills, and attitudes - formed the foundational dimensions of the coding manual. The coding process were referred to Braun and Clarke (2006)'s step-by-step guide which were divided into six phases. The total number of themes extracted from the interview as presented in Table 3.

Knowledge	Skills	Attitudes
Intercultural knowledge (n. 5)	Multiperspectivity (n. 3)	Proactiveness (n. 4)
Communicative knowledge (n. 4)	Acknowledge the differences (n. 2)	Inclusive attitude (n. 4)
	Attentive listening (n. 2)	Politeness (n. 4)
		Empathy (n. 1)

Table 3: Emergent themes from the interview data. \*( ) is the number of respondents

### Knowledge

The results indicated that the most frequently cited keyword was having intercultural knowledge, followed by communicative knowledge. The following are excerpts from the interviews:

*“In the end, gaining knowledge to understand the other person is probably the most important in intercultural understanding.” (Student D)*

*“I think gaining new knowledge and learning new things contribute to intercultural understanding.” (Student G)*

These students put the significance on possessing intercultural knowledge or knowledge of mutual interests, to initiate and form their discussion, and having further in-depth and sustainable conversations. According to them, by sharing not only cultural knowledge but also knowledge of mutual interests (e.g., gaming, anime), they gained insights into each other's perspectives, which lead them to foster mutual understanding. While possessing intercultural knowledge was valued, several students articulated their experiences of not receiving replies to their posts despite they wanted to have continuous interactions. To address the issue, the Japanese students endeavoured to adopt a more casual tone by incorporating emoji or focused on their proficiency in writing English. Hence, these students' reflections may arise from their experiences of lacking continuous interactions or a lack of responses to their posts.

Another frequently cited word from a knowledge dimension is communicative knowledge, which includes linguistic and socio-linguistic knowledge. Here are excerpts from the interviews:

*“What I’m consciously doing is waiting for the other person to finish the sentence completely. Japanese people are often said to use a lot of backchanneling, right? So, I let the speaker finish the sentence, and then I use backchannels and similar expressions to communicate.” (Student D)*

*“Through virtual exchange, I reacknowledged that English is the common language. In intercultural communication, having English skill is indispensable to have in-depth conversations.” (Student B)*

These results aligned with the finding discussed in the previous section, in which cognitive knowledge was highly emphasized in intercultural communication. When using a foreign language as a medium for intercultural communication, language including proficiency, sociolinguistic understanding and pragmatics knowledge are crucial for successful intercultural encounters (Kaemper, 2009). These students highlighted the acquisition of enhanced English skills, but not limited to linguistic skills, as imperative for facilitating smooth communication and cultivating mutual understanding.

### **Skills**

Three students valued having flexible thinking skills including having various perspectives, not being bound by fixed ideas, and not denying others’ ideas. The following are examples of their responses:

*“There are various and different ways of thinking about things, so I try to think that even if it’s different from my own, well, that’s just how it is. I try not to have judgemental views and instead, I try to accept it as much as possible.” (Student A)*

*“I believe it is important to question social stereotypes.” (Student F)*

From these statements, it is observed that these students prioritise open-minded, and flexible thinking skills over being critical to other’s perspectives or practices. In other words, they place importance on embracing multiple perspectives. This may not necessarily correspond to Byram’s ICC model (1997), where critical cultural awareness takes precedence. As Davis and Cho (2005) emphasize, the ability to see things from multiple perspectives, rather than confined to a single viewpoint is valued among Japanese students.

### **Attitudes**

A significance finding from attitudinal dimension is that among the seven students, three students emphasized the significance of verbally expressing their thoughts which can be labelled as having autonomy or proactiveness. The following are excerpts from the interviews:

*“I got the impression that foreign students hold their opinions and express their thoughts without hesitation. They are not influenced by others’ perspectives or align their opinions with those of others. I feel like I want to apply that to myself.” (Student C)*

*“I have a strong awareness that when speaking to people from other countries, I need to express myself clearly.” (Student E)*

Byram's ICC model and Deardorff's Pyramid and Process models include cultural curiosity, openness, and respect in the attitude dimension. While politeness and inclusive attitudes were appreciated by Japanese students, a greater emphasis was placed on proactiveness and active engagement in communication. Furthermore, based on their statements, it was noted that being able to articulate one's thoughts in intercultural communication - in other words, conveying one's messages in a way that is understood by others is valued by Japanese students. In fact, several interviewees articulated their fears of speaking English in a physical context. They found it more comfortable to engage and communicate in English within an online context. This may be explained that Japanese students in the IVEProject were able to take their time to comprehend the posts, and construct replies in English. Consequently, online environment was effective for the Japanese students in gaining confidence in intercultural communication.

Another insight gleaned from the interview data was that Japanese students were aware that self-expression holds significance in intercultural communication. Several students expressed that when having communication in English, they tend to articulate their thoughts more freely compared to when communicating in Japanese. It was observed that when communicating with individuals in intercultural settings, Japanese students transitioned from adaptive conformity to proactive and self-expressive communication.

### **Conclusion and Limitation**

The study has highlighted various significant implications for educational practice and future research. It is evident that virtual exchange plays a role in fostering students' intercultural competence. Regarding the question concerning whether certain aspects of intercultural competence were affected by the participation of virtual exchange, cognitive development of CQS was observed. As for the Japanese perception of intercultural competence, based on the interviews several keywords and their significance were identified which were insightful in acquiring a more nuanced understanding of intercultural competence at specific cultural settings. Yet, given that these findings are preliminary in nature, further in-depth analysis needs to be undertaken.

This study has several limitations despite the above findings and implications. First, although the sample size is sufficient to undertake the paired-sample test, it would be ideal if the sample size was larger. In addition, examinations into different types of virtual exchange (e.g., synchronous virtual communication, asynchronous virtual communication) to further understand its impact and effectiveness in intercultural competence development is needed. Lastly, this study has adopted an inductive thematic analysis for the qualitative data. In the future, it would be beneficial to conduct a deductive thematic analysis using predefined themes from existing intercultural frameworks and cross analyse between inductive and deductive themes.

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