



From Cultural Knowledge to Empathic Perspective-Shifting: A Study of Intercultural Understanding in a Short-Term Virtual Exchange among Asian University Students

Samanan Sudsa-ard^a, Wimonnit Chaokongjakra^{b,*}, Loh Khai Xian^c

^asamanan.s@litu.tu.ac.th, Language Institute, Thammasat University, Thailand

^bwimonnit.c@litu.tu.ac.th, Language Institute, Thammasat University, Thailand

^clkxian@utm.my, Language Academy, Faculty of Social Sciences and Humanities, Universiti Teknologi Malaysia

*Corresponding author, wimonnit.c@litu.tu.ac.th

APA Citation:

Sudsa-ard, S., Chaokongjakra, W., & Loh, K. X. (2026). From cultural knowledge to empathic perspective-shifting: A study of intercultural understanding in a short-term virtual exchange among Asian university students. *LEARN Journal: Language Education and Acquisition Research Network*, 19(2), 1171-1203. <https://doi.org/10.70730/ZUVN5293>

Received
09/01/2026

Received in
revised form
15/06/2026

Accepted
17/07/2026

ABSTRACT

Virtual exchange (VE) has become an increasingly important approach for promoting intercultural learning in higher education, particularly where physical mobility is limited. However, less is known about how short-term intercultural interaction contributes to different dimensions of intercultural understanding and empathy. This study examines how university students' intercultural understanding and empathy changed after a short-term online intercultural exchange activity and identifies which dimensions of intercultural competence were most visible in their written reflections. The activity connected students from three universities in different cultural contexts through guided online intercultural

	conversations. Data consisted of pre- and post-activity questionnaire responses and written reflections collected across three interaction sessions. Nineteen students with matched pre- and post-activity questionnaire responses were included in the quantitative analysis, while 23 students' coded reflections were examined qualitatively. The questionnaire contained 29 Likert-scale items related to intercultural understanding, empathy, openness, communication, cultural awareness, and respect for diversity. Negatively worded items were reverse-scored, and paired-samples analysis was used to compare composite pre- and post-activity scores. Results showed a statistically significant positive change in students' intercultural understanding and empathy. The largest gains appeared in students' confidence introducing their own culture, comfort discussing cultural topics, effort to understand their own culture, empathic response to people from other cultures, and ability to adapt communication. Qualitative findings showed that knowledge was the most visible dimension in reflections, followed by internal shift, attitudes, interpreting/relating, and discovery/interaction. The findings suggest that short-term online intercultural exchange can support measurable gains in confidence, empathy, and intercultural awareness while also revealing the need for stronger scaffolding of active discovery and interaction strategies. The article contributes to intercultural competence and virtual exchange research by integrating pre/post measurement with coded reflective evidence of students' intercultural learning. Keywords: intercultural understanding; empathy; virtual exchange; online intercultural exchange; student reflection
--	--

Introduction

English language education increasingly requires learners to communicate, collaborate, and make meaning across cultural boundaries. In contemporary ELT, language competence is no longer limited to grammatical accuracy or fluency; it also involves the capacity to use English to negotiate meaning with interlocutors whose cultural, linguistic, and educational backgrounds differ from one's own. Recent work on virtual exchange in language teaching argues that online intercultural interaction can connect linguistic practice with intercultural communicative competence when it is guided by purposeful tasks, reflection, and teacher facilitation (Dooly & Vinagre, 2022; O'Dowd, 2021). This is particularly important for students

who have limited access to physical mobility, long-term study abroad, or sustained international contact. For these learners, online intercultural exchange and Collaborative Online International Learning (COIL) can function as forms of internationalization at home and as practical ELT spaces in which English is used for authentic cross-cultural communication.

Virtual exchange is generally understood as structured online interaction between groups of learners from different cultural or geographical contexts, normally embedded in coursework and facilitated by educators. It differs from casual online communication because it includes educational goals, guided tasks, reflection, and opportunities to compare cultural experiences. Recent empirical studies have shown that virtual exchange can contribute to intercultural competence and communication confidence in higher education, including in Asian and discipline-specific contexts (Chu et al., 2024; Hackett et al., 2023; Heymans et al., 2024). In the present study, students from universities in Japan, Thailand, and Malaysia joined short English-mediated online conversations and wrote reflections after the meetings. The activity was relatively short, but it provided students with direct opportunities to introduce themselves, discuss everyday culture, share hobbies and food practices, compare university life, and talk about future plans.

A key challenge in ELT-oriented intercultural learning research is that improvement is often assumed rather than demonstrated. Students may report that an exchange was enjoyable, but enjoyment alone does not prove intercultural learning. Similarly, students may learn factual information about another country, but intercultural competence includes more than cultural facts. It also involves curiosity, openness, self-awareness, interpreting and relating practices, communication strategies, and the ability to respond to difference respectfully. Recent reviews of technology-supported intercultural learning and online intercultural competence development have called for studies that examine not only whether students improve, but also which dimensions of intercultural learning are strengthened and which require more explicit pedagogical scaffolding (Zhou et al., 2024; Zuo, 2025). The present study therefore addresses an ELT-related problem: short online exchanges are increasingly feasible and attractive, but instructors need clearer evidence about what such brief English-mediated exchanges actually develop in students' intercultural understanding and empathy.

The novelty of this study lies in its focus on a short-term Asian regional virtual exchange and its integration of pre/post questionnaire data with coded written reflections. Rather than treating virtual exchange as automatically beneficial, the study asks two more precise questions: whether students' self-reported intercultural understanding and empathy changed, and which dimensions of intercultural competence were most visible in their

reflective writing. This design allows the article to connect measurable outcomes with evidence of the learning processes students described in their own words.

Literature Review

Intercultural Competence as a Multidimensional Construct

Intercultural competence has been widely conceptualized as a multidimensional capacity that integrates knowledge, attitudes, skills, awareness, and action. Rather than referring only to knowledge about another country or culture, intercultural competence involves the ability to interpret cultural meanings, relate unfamiliar cultural practices to one's own frame of reference, communicate appropriately across difference, and reflect critically on one's assumptions. Byram's (1997, 2021) model of intercultural communicative competence remains one of the most influential frameworks in language and intercultural education because it identifies five interrelated dimensions: attitudes of curiosity and openness, knowledge of social groups and cultural practices, skills of interpreting and relating, skills of discovery and interaction, and critical cultural awareness. This model is particularly relevant to the present study because the students' written reflections were coded according to dimensions that closely correspond to Byram's framework.

Byram's (1997) framework is useful because it distinguishes between simply knowing information about another culture and being able to use that knowledge in intercultural interpretation and interaction. In this model, intercultural competence requires learners to suspend premature judgment, interpret cultural practices from multiple perspectives, compare cultural meanings, and critically evaluate cultural assumptions. This distinction is important for studies of short-term intercultural exchange because students may initially describe visible cultural products, such as food, festivals, education systems, or daily life, without necessarily demonstrating deeper intercultural interpretation. Therefore, an analysis of intercultural competence should examine not only whether students learned cultural facts, but also whether they demonstrated openness, comparison, reflection, empathy, and strategies for interaction.

Deardorff's (2006) process model similarly conceptualizes intercultural competence as a developmental and multidimensional process. Her model emphasizes attitudes, knowledge and comprehension, skills, desired internal outcomes, and desired external outcomes. Attitudes such as respect, openness, curiosity, and discovery are presented as foundational because they shape how learners approach cultural difference. Knowledge

and comprehension include cultural self-awareness, deep cultural knowledge, sociolinguistic awareness, and understanding of others' worldviews. Skills include listening, observing, evaluating, analysing, interpreting, and relating. These dimensions lead to internal outcomes such as adaptability, flexibility, ethnorelative perspectives, and empathy, and eventually to external outcomes such as effective and appropriate communication in intercultural situations.

The present study draws on these models in two ways. First, the questionnaire examines students' self-reported intercultural understanding, empathy, openness, communication, cultural awareness, and respect for diversity, constructs that are also central to established intercultural sensitivity and competence research (Chen & Starosta, 2000; Deardorff, 2006). Second, the reflection coding scheme includes knowledge, attitudes, interpreting/relating, discovery/interaction, and internal shift. Internal shift is especially important because it captures evidence that students moved beyond reporting cultural information toward reflecting on confidence, self-awareness, empathy, or changed perspectives. Thus, this study treats intercultural competence as a layered construct in which knowledge is important but insufficient by itself.

A recurring issue in intercultural competence research concerns the relationship between cultural knowledge and deeper intercultural learning. Cultural knowledge can support intercultural competence when it helps learners notice difference, challenge stereotypes, and contextualize communication. However, knowledge may remain superficial if students merely collect facts about food, festivals, tourist sites, or national customs. More advanced intercultural learning requires learners to compare perspectives, recognize the partiality of their own assumptions, respond to ambiguity, and adapt communication. Bennett's developmental model of intercultural sensitivity also suggests that intercultural development involves movement from ethnocentric orientations toward more ethnorelative ways of experiencing cultural difference (Bennett, 1993). This distinction is central to the present article because the study examines whether students' reflections remained primarily at the level of cultural knowledge or also showed evidence of deeper intercultural interpretation and interaction strategies. Systematic reviews of cross-cultural communicative competence in EFL teaching have similarly underscored the importance of teacher pedagogical strategies and student engagement in developing intercultural communicative competence effectively (Zhou et al., 2024).

Empathy and Intercultural Understanding

Empathy is frequently discussed as both an affective and cognitive dimension of intercultural learning. Affective empathy involves emotional

responsiveness to others' experiences, whereas cognitive empathy involves perspective-taking and the capacity to understand how another person may interpret a situation. Davis's (1983) multidimensional approach to empathy is useful here because it distinguishes related but separate aspects of empathy, including perspective-taking and empathic concern. In intercultural education, empathy does not mean agreement with all cultural practices or values. Rather, it involves trying to understand others' feelings, values, constraints, and experiences even when they differ from one's own.

Intercultural understanding and empathy are closely connected. Understanding cultural difference can create the conditions for empathy because learners become aware that people's behaviours and values are shaped by different social, religious, linguistic, educational, and family contexts. At the same time, empathy can deepen intercultural understanding because it encourages learners to move beyond simple comparison and consider how others experience the world. Deardorff's (2006) model places empathy among the desired internal outcomes of intercultural competence, suggesting that empathy is not merely a personal feeling but part of a broader developmental process involving openness, flexibility, and perspective-shifting.

The literature also cautions that empathy should not be treated as an automatic result of intercultural contact. Contact with culturally different peers can create curiosity and openness, but it can also reproduce stereotypes if interactions are brief, unstructured, or unequal. Research on intercultural learning and study abroad has repeatedly shown that exposure alone is not sufficient; learners require structured opportunities for reflection, interaction, and critical interpretation if they are to develop deeper intercultural understanding (Kinging, 2009). This caution is directly relevant to short-term intercultural exchange because students may report enjoyment and increased awareness without necessarily developing sustained intercultural strategies.

Therefore, educators need to design tasks that encourage listening, perspective-taking, and reflection. Written reflections are particularly useful because they invite students to articulate what they noticed, how they felt, what surprised them, and how their thinking changed. Reflection can make empathy visible by showing whether students attempted to understand others' viewpoints, recognized shared human concerns, or reconsidered assumptions about cultural difference. In the present study, several questionnaire items directly address empathy, including students' effort to empathize with people from other cultures and their perceived ability to understand and share the feelings of people from different cultural backgrounds.

Empathy is especially relevant in Asian regional exchange contexts because students may perceive both similarity and difference. Students from Japan, Thailand, and Malaysia may share some regional references, such as popular culture, tourism interests, education pressures, or the use of English as a lingua franca in academic communication. At the same time, they may encounter differences in language confidence, religion, food practices, university structures, local customs, and future aspirations. These overlapping similarities and differences create rich conditions for intercultural understanding because students can recognize common ground without reducing the other to sameness.

Virtual Exchange and Intercultural Learning in Higher Education

Virtual exchange has become an important approach to internationalization at home in higher education (Lewis & O'Dowd, 2016). Specifically, O'Dowd (2018) describes virtual exchange as online intercultural interaction and collaboration between classes or groups under educator guidance. It provides opportunities for students to engage with peers in other locations without requiring physical mobility. This approach is particularly valuable for institutions that seek to internationalize curricula but face constraints related to cost, time, travel access, visa restrictions, or unequal mobility opportunities.

Research suggests that virtual exchange can support intercultural learning, language confidence, motivation, and global awareness. Studies of telecollaboration and collaborative online international learning have shown that students often value the opportunity to communicate with international peers and learn about everyday cultural practices. Godwin-Jones (2019), for example, argues that telecollaboration can provide meaningful opportunities for developing intercultural communication competence when online interaction is connected to pedagogical goals. Similarly, Hackett et al. (2023) found that collaborative online international learning can contribute to intercultural competence development in higher education when students participate in structured cross-border learning activities. Chu et al. (2024) further found positive effects of asynchronous virtual exchange on intercultural competence among undergraduate students in an Asian university context, and comparable gains have been reported across different disciplines in health education settings (Heymans et al., 2024). Virtual exchange in language teaching and learning has also been shown to support students' development of both linguistic and intercultural competences (Dooly & Vinagre, 2022). Furthermore, learners' perceptions of online intercultural exchange have generally been positive, with students reporting

increased interest, motivation, and engagement when interacting with international peers through Web 2.0 tools (Lee & Markey, 2014).

At the same time, the literature cautions against assuming that virtual exchange automatically produces intercultural competence. Online contact needs to be pedagogically structured. Students may remain at the level of exchanging cultural facts if tasks focus only on introductions and general sharing. They may also avoid difficult topics if they lack linguistic confidence, fear offending peers, or do not know how to ask culturally sensitive questions. Helm (2015) notes that telecollaboration involves not only opportunities but also challenges related to institutional support, task design, teacher preparation, and communication across difference. Therefore, virtual exchange should be understood as a pedagogical design rather than simply as online contact.

Researchers have increasingly emphasized the importance of task design, facilitation, reflection prompts, and assessment practices in virtual exchange. Intercultural learning is more likely when students are asked to interpret cultural meanings, compare perspectives, reflect on moments of misunderstanding or surprise, and connect interaction with course concepts. O'Dowd (2018) argues that virtual exchange has developed into a diverse field with different models and aims, but successful projects generally require purposeful pedagogical integration. In this sense, the quality of the intercultural task is as important as the fact of international contact itself.

This body of research shows that virtual exchange has moved from an innovative technology-mediated practice to an increasingly established ELT and higher education pedagogy. However, empirical findings remain uneven. Some studies report gains in confidence, motivation, cultural awareness, and intercultural competence, whereas others emphasize that learning outcomes depend on task design, facilitation, interaction quality, and reflection (Dooley & Vinagre, 2022; Hackett et al., 2023; Helm, 2015; O'Dowd, 2021). Short activities are common in higher education because they are easier to integrate into existing courses than semester-long collaborative online international learning projects. At the same time, short exchanges create a methodological and pedagogical tension: they may open a valuable intercultural space, but they may not provide enough time for deeper negotiation of meaning or sustained critical reflection.

Recent empirical studies also suggest that context matters. Chu et al. (2024) reported positive effects of asynchronous virtual exchange on undergraduate students' intercultural competence in an Asian university context, while Heymans et al. (2024) showed that undergraduate health students perceived virtual exchange as beneficial for intercultural competence development across disciplinary boundaries. O'Dowd's (2021) qualitative content analysis of learning outcomes across multiple virtual exchanges

further indicates that students may report a range of outcomes, including communication skills, cultural knowledge, collaboration, and self-awareness. Together, these studies suggest that virtual exchange can support intercultural learning, but they also reinforce the need to examine the specific types of learning that become visible in particular contexts.

Reflection as Evidence of Intercultural Development

Reflective writing is widely used to examine intercultural learning because it reveals how students interpret their experiences. Surveys can show whether students report higher confidence, awareness, or empathy after an activity, but reflections show the content and quality of learning. They can reveal what students noticed, which cultural themes they found meaningful, whether they compared perspectives, and whether they recognized changes in themselves. For this reason, several studies of virtual exchange and collaborative online international learning use reflective journals, portfolios, discussion posts, or essays alongside questionnaires.

Reflection is particularly useful for identifying the difference between descriptive and analytical intercultural learning. Descriptive reflections report what happened, such as the topics discussed or the cultural facts learned. Analytical reflections explain why something mattered, how it challenged an assumption, or how it changed the student's view. McAllister et al. (2006) show that reflection can illuminate processes through which students develop cultural knowledge and intercultural competence, particularly when learners examine critical incidents and interpret the meaning of their experiences. This is important because a student may mention another culture frequently without necessarily demonstrating deeper intercultural awareness.

For this reason, reflection data are increasingly analysed not only by counting codes but also by identifying broader themes in how students make sense of intercultural encounters. In ELT contexts, this is important because learners may write about language confidence, anxiety, willingness to communicate, and self-positioning alongside cultural knowledge. A thematic or content-analytic reading of reflections can therefore show whether students remain at the level of cultural description or move toward interpretation, empathy, and strategic communication.

In virtual exchange research, reflective writing has been used to examine how students connect online interaction with intercultural learning. Mestre-Segarra and Ruiz-Garrido (2022), for example, examined students' reflections in a collaborative online international learning project and found that reflections can reveal students' perceptions of cultural awareness, communication, and cross-disciplinary learning. Such work supports the use of reflection as a qualitative source for understanding what students believe

they learned and how they interpret intercultural contact. The present study follows this approach by using coded written reflections to identify the dimensions of intercultural competence most visible in students' accounts.

However, reflection data must be interpreted carefully. Students' writing may be limited by language proficiency, time, prompt design, or uncertainty about what the teacher expects. Some students may have experienced deeper learning than they expressed in writing. Others may write positive comments without providing much evidence of intercultural analysis. Therefore, this study treats coded reflections as visible evidence, not as a complete measure of students' internal development. This distinction is important because the second research question asks which dimensions were most visible in students' written reflections, not which dimensions were fully developed.

The coding scheme used in this study aligns with the literature by distinguishing knowledge, attitudes, interpreting/relating, discovery/interaction, and internal shift. Knowledge includes learning about cultural practices, food, education, religion, places, hobbies, university life, and future plans. Attitudes include openness, curiosity, enjoyment, and willingness to communicate. Interpreting/relating includes comparing cultures, noticing similarities and differences, and connecting others' experiences to one's own. Discovery/interaction includes asking questions, simplifying language, using gestures, overcoming communication problems, or seeking additional information. Internal shift includes evidence of self-awareness, confidence, empathy, motivation, or changed perspective. These categories make it possible to identify whether the exchange produced mainly descriptive cultural learning or whether students also demonstrated deeper reflection and perspective-shifting.

Overall, the literature suggests that intercultural competence develops through a combination of knowledge, attitudes, skills, reflection, empathy, and interaction. The present study is positioned within this scholarship by examining both measurable change and reflective evidence of learning. By focusing on students' intercultural understanding, empathy, and written reflections, the present study contributes to a more nuanced understanding of short-term online intercultural exchange in higher education. According to this, the section below presents the research gap and contribution of the present study.

Research Gap and Questions

Despite the growth of virtual exchange research, three gaps remain particularly relevant to ELT. First, many studies emphasize general student satisfaction or perceived benefits, but fewer show how short English-

mediated exchanges affect specific dimensions of intercultural understanding and empathy. Second, research often treats intercultural competence as a broad outcome, leaving underexplored which dimensions are most visible in students' own reflective accounts. Third, although recent studies have highlighted the value of reflection and task design, more evidence is needed from Asian regional exchanges in which English functions as a lingua franca among multilingual university students. These gaps matter because ELT instructors need to know whether brief online exchanges mainly increase cultural knowledge, whether they also promote empathy and self-awareness, and whether students develop active discovery and interaction strategies.

Previous research has shown that virtual exchange and collaborative online international learning can contribute to intercultural learning, but outcomes depend heavily on design, facilitation, and reflection. Hackett et al. (2023) provide evidence that collaborative online international learning can support intercultural competence development, while O'Dowd (2021) shows that students' reported learning outcomes vary across exchange designs. Dooley and Vinagre (2022) emphasize the relevance of virtual exchange for language teaching and learning, while Helm (2015) highlights the need to attend to institutional and pedagogical challenges. Similarly, reflection-based studies show that students' written accounts can reveal cultural awareness and learning processes, but they may also show uneven levels of depth (McAllister et al., 2006; Mestre-Segarra & Ruiz-Garrido, 2022).

The present study addresses this gap by the following research questions:

- (1) How did students' intercultural understanding and empathy change after participating in the intercultural activity?
- (2) Which dimensions of intercultural competence were most visible in students' written reflections? These questions deliberately focus on both outcomes and processes.

The first question asks whether students changed after participation. The second question explores what kinds of intercultural learning were most evident in the reflections. Together, the questions make it possible to discuss not only whether the activity was useful, but also what type of intercultural learning it appeared to support most strongly.

The significance of this article lies in its mixed-methods contribution to ELT-oriented research on short-term intercultural exchange in Asian higher education. Much of the literature on virtual exchange has focused on European, North American, or transatlantic contexts, and many studies discuss intercultural learning at a broad level. By analysing questionnaire change together with coded and thematically interpreted reflections, this article provides an evidence-based account of how intercultural

understanding and empathy develop in a brief English-mediated online exchange among students from neighbouring Asian countries.

Methodology

Research Design

The study used a mixed-methods design combining quantitative pre/post questionnaire analysis with qualitative coding of written reflections. A mixed-methods approach was appropriate because the research questions required two kinds of evidence. The first research question concerned change in students' intercultural understanding and empathy after the activity, which was examined through matched pre- and post-activity questionnaire responses. The second research question concerned the dimensions of intercultural competence most visible in students' reflections, which required qualitative coding and interpretation.

The design can be described as a convergent mixed-methods design as quantitative and qualitative data were collected around the same intervention and then interpreted together. The questionnaire data provided evidence of measurable change, while the reflection data provided evidence of the kinds of intercultural learning students described. The integration of these sources allowed the study to move beyond a simple before-and-after evaluation and discuss how the reported changes were reflected in students' written accounts.

Context and Participants

The intercultural activity involved students from Chuo University in Japan, Thammasat University in Thailand, and Universiti Teknologi Malaysia. Students participated in online exchange sessions in which they introduced themselves, discussed cultural topics, shared personal interests, compared everyday practices, and talked about future plans. The activity was designed to provide direct peer-to-peer intercultural contact in an accessible online format.

The pre-activity questionnaire contained 32 responses and the post-activity questionnaire contained 20 responses. Across the two data sets, 19 student responses were matched and included in the quantitative pre/post analysis. Written reflections were collected from 31 students across three interaction sessions. Of these, 23 reflections were included in the qualitative coding analysis. The remaining eight were excluded because they were either too brief to yield meaningful coding (fewer than two sentences), submitted in a language other than English without translation, or lacked sufficient detail to assign any of the five coding categories reliably. Only reflections that

contained researcher-assigned code labels were included in the frequency analysis for the second research question.

The participant group was diverse in institutional context and cultural background. The coded reflection included students from Chuo University, Thammasat University, and Universiti Teknologi Malaysia. The questionnaire data included students from multiple programs, including English, TESL, accounting, engineering-related fields, and other university majors. Most participants were young adults, with the matched questionnaire group ranging mainly from 18 to 24 years old. Because the sample was relatively small, the study should be interpreted as a context-specific exploratory mixed-methods study rather than a generalizable large-scale evaluation.

Instruments and Data Sources

Two data sources were used in this study. The first data source was a pre-activity questionnaire on intercultural understanding and empathy. The second data source was a post-activity questionnaire using comparable Likert-scale items. The questionnaire contained 29 Likert-scale items scored on a five-point scale. The items were developed specifically for this exploratory study rather than adopted as a standardized scale. Item development was theory-driven: the questionnaire content was aligned with Byram's (1997, 2021) dimensions of intercultural communicative competence, Deardorff's (2006) process model of intercultural competence, and empathy constructs associated with perspective-taking and empathic concern (Davis, 1983). Items addressed familiarity with other cultures, interaction with people from different cultural backgrounds, confidence introducing one's own culture, effort to understand one's own and other cultures, interest in cultural difference, comfort interacting across cultures, empathy, communication adaptation, respect for cultural differences, willingness to change opinions, and self-ratings of empathy, openness, communication, cultural awareness, and respect for diversity.

To strengthen content relevance, each questionnaire item was mapped to one or more target constructs before analysis: intercultural knowledge, openness/attitudes, cultural self-awareness, empathy, communication adaptation, and respect for diversity. The questionnaire was not intended to function as a fully validated psychometric instrument; therefore, the findings are interpreted as self-reported indicators of change rather than as a comprehensive measurement of intercultural competence. Internal consistency was examined using Cronbach's alpha for the composite scale, and the high reliability values reported below support the use of an overall composite score for this exploratory pre/post analysis. A formal Item-

Objective Congruence procedure was not conducted, and this limitation is acknowledged in the validity discussion.

The qualitative data source was students' written reflections after the exchange sessions. Reflections were analysed through a theory-informed qualitative content analysis. The coding approach was primarily deductive because four categories - attitudes, knowledge, interpreting/relating, and discovery/interaction - were derived from intercultural competence theory, particularly Byram's framework. The category of internal shift was added to capture reflective evidence of confidence, empathy, motivation, self-awareness, or changed perspective that did not fit neatly into the other categories. Each reflection could receive more than one code because a single response might include knowledge, attitude, and internal shift at the same time. For example, a student might report learning about a cultural practice, feeling more confident, and comparing that practice with their own culture.

Data Analysis

For the quantitative analysis, matched pre- and post-activity responses ($n = 19$) were identified and verified by cross-referencing respondent identifiers across both data sets. After matching, a composite mean score was calculated for each student at pre-test and post-test by averaging the 29 items. A paired-samples t-test was then used to examine whether the post-activity composite mean differed significantly from the pre-activity composite mean. Cohen's d_z was calculated as an effect size by dividing the mean of the paired differences by the standard deviation of the paired differences. Item-level descriptive statistics were also calculated to identify which questionnaire items showed the largest positive gains.

For the qualitative analysis, the coded reflection sheet was examined in two stages. First, the frequency of each code was counted across reflections. Because reflections could contain multiple codes, the frequencies represent occurrences of coded dimensions rather than numbers of students. Second, the coded data were re-read thematically to identify broader patterns across the reflections. This second stage allowed the analysis to move beyond frequency counts and interpret how students described intercultural learning, empathy, self-awareness, and communication.

Coding was conducted manually using a theory-informed codebook. Initial coding decisions were made by applying the definitions of the five coding categories to each reflection. Ambiguous cases were resolved by returning to the full reflection and considering the primary meaning of the excerpt in context. To strengthen dependability, the coded reflections were checked again after an interval and discussed among the author team to clarify category boundaries. Because the study did not employ two fully independent

coders for the full data set, Cohen's kappa was not calculated; instead, the study reports the coding procedure transparently and treats the qualitative findings as interpretive evidence of visible reflective patterns rather than as a definitive measurement of students' internal development.

Integration of the quantitative and qualitative results occurred in the discussion section. The quantitative results identified areas of measurable change, while the qualitative results showed which dimensions were most visible in students' reflection discourse. The integrated interpretation asked whether the dimensions that increased in the questionnaire were also visible in reflections and whether some dimensions appeared less frequently despite overall improvement.

Trustworthiness, Validity, and Ethical Considerations

Several steps were taken to strengthen trustworthiness. First, the quantitative analysis used only matched pre/post respondents, making it possible to compare the same students before and after the activity. Second, reliability was calculated for the composite scale (Cronbach's $\alpha = .93$ for the pre-activity questionnaire, $\alpha = .91$ for the post-activity questionnaire, and $\alpha = .93$ for combined pre/post item responses). Third, the questionnaire items were mapped to theoretical constructs before analysis to support content relevance. Fourth, qualitative findings were reported with representative excerpts so that readers can see how the codes and themes were grounded in the reflections.

The study also has limitations related to validity. The questionnaire measured self-reported intercultural understanding and empathy rather than observed intercultural behavior, and it was developed for the present exploratory study rather than validated through a full psychometric process. Self-report data can also be affected by social desirability, response styles, and students' desire to evaluate an activity positively. The reflection data depended on students' English expression, time, and willingness to write in detail. Therefore, the study does not claim to measure the entirety of students' intercultural competence. It examines reported change and visible reflective evidence within the available data.

To protect participant anonymity, all matched questionnaire responses and reflection excerpts were assigned numerical identifiers rather than real names. No identifying personal information is reported in the findings or discussion. Reflection excerpts are used only to illustrate themes, and identifying details are minimized.

Findings

RQ1: Changes in Intercultural Understanding and Empathy after the Activity

Quantitative Findings

The first research question asked how students' intercultural understanding and empathy changed after participating in the activity. The matched pre/post analysis ($n = 19$) showed a positive and statistically significant change (see Table 1). The adjusted composite mean increased from 4.04 before the activity to 4.34 after the activity on a five-point scale. The mean paired difference was 0.30 points. A paired-samples t -test showed that this increase was statistically significant, $t(18) = 3.84, p = .001$. The effect size was Cohen's $d_z = 0.88$, which can be interpreted as a large within-subjects effect in this small sample.

The pre-activity mean was already high, indicating that students entered the activity with generally positive intercultural dispositions. This is important for interpretation because the activity did not move students from low to high intercultural awareness. Rather, it strengthened an already positive orientation. In other words, the data suggest a meaningful positive shift within a group that was already open to intercultural learning. This pattern is common in voluntary or course-based intercultural activities because students who participate may already be interested in cultural exchange.

The largest item-level gains provide a clearer picture of what changed. Students showed the strongest improvement in confidence introducing their own culture to others, comfort discussing cultural topics, effort to understand their own culture, empathy toward people from other cultures, and communication adaptation. These item-level changes suggest that the activity did not only expose students to information about others. It also helped them feel more able to talk about their own culture, engage in intercultural discussion, and respond empathically to people from other backgrounds.

The strongest gain was confidence in introducing one's own culture. This finding is notable because intercultural competence involves self-representation as well as understanding others. Students may initially think of intercultural learning as learning about another country, but online exchange requires them to explain their own practices, values, and experiences to others. The data indicate that this act of cultural self-explanation became easier or more comfortable after the activity.

Empathy also improved. The item measuring students' effort to empathize with people from other cultures when learning about their challenges increased from 4.16 to 4.74. This suggests that direct peer

interaction and reflection may have encouraged students to consider others' perspectives more seriously. However, because the baseline score was already high, the finding should be interpreted as strengthening of empathy rather than the creation of empathy from absence.

Table 1

Largest Positive Item-Level Gains

Item	Questionnaire Focus	Pre	Post	Gain	<i>p</i>
3	I feel confident introducing my own culture to others.	3.47	4.21	0.74	.003*
14	I feel comfortable discussing cultural topics, even when they are sensitive	3.68	4.32	0.63	.014*
4	I make an effort to understand my own culture.	3.89	4.47	0.58	.002*
9	I try to empathise with people from other cultures when I learn about their challenges.	4.16	4.74	0.58	.007*
27	Communication: My ability to adapt my communication style when talking with people from other cultures.	3.84	4.32	0.47	.008*
7	I feel comfortable interacting with people from diverse cultural backgrounds.	4.16	4.58	0.42	.057
28	Cultural Awareness: My understanding of cultural differences and similarities.	3.68	4.11	0.42	.007*
5	I make an effort to understand other cultures.	4.00	4.37	0.37	.049*
1	I am familiar with cultures outside my own.	3.26	3.63	0.37	.069
15	I believe people from different cultures can find common ground despite their differences.	4.42	4.79	0.37	.005*

Note: * $p < 0.05$; Items marked with * reached statistical significance at $p < 0.05$; Items 1 and 7 showed positive gains but did not reach statistical significance.

Interpretation of the Quantitative Pattern

The quantitative findings indicate that the activity supported three related forms of change: confidence, relational openness, and reflective self-awareness. First, the increase in confidence introducing one's own culture suggests that students gained experience in presenting cultural information and personal experience to international peers. Second, the increase in comfort discussing cultural topics and interacting with diverse peers suggests that the activity reduced anxiety or unfamiliarity. Third, the increase in effort to understand one's own culture suggests that students' intercultural learning turned inward. They did not only learn about others; they also became more aware of the need to understand their own cultural background.

The changes in communication and empathy are also important. The item on adapting communication style increased from 3.84 to 4.32. This gain is smaller than the gain for confidence, but it points toward interactional

development. Students may have learned that successful intercultural communication depends not on perfect English but on willingness, clarity, patience, and adaptation. This interpretation is supported by reflection excerpts in which students mentioned using easier English, realizing that imperfect English could still be understood, or becoming more comfortable speaking.

Not all items changed equally. Some items showed little or no change because they were already very high before the activity. Respect for diversity, for example, remained high in both pre- and post-activity responses. This ceiling effect is important because it suggests that the activity's strongest measurable impact was not on general respect, which students already endorsed, but on more situated confidence and comfort. This distinction matters for pedagogy: students may already believe in respecting other cultures, but they still need practice interacting, explaining their own culture, and discussing unfamiliar topics.

RQ2: Dimensions of Intercultural Competence Visible in Reflections

Qualitative Findings

The second research question asked which dimensions of intercultural competence were most visible in students' written reflections. The coded reflection data showed a clear pattern (See Table 2). Knowledge was the most frequent code, with 53 occurrences. Internal shift was the second most frequent, with 38 occurrences. Attitudes appeared 28 times, interpreting/relating appeared 19 times, and discovery/interaction appeared 10 times. This distribution suggests that students most often wrote about what they learned, followed by how the experience affected their thinking, confidence, or perspective.

Knowledge was the dominant dimension. Students frequently mentioned learning about food, hobbies, anime, religion, university life, tourist places, language, dreams, part-time jobs, education systems, and future plans. These topics are typical of introductory intercultural exchange because they are accessible, personally meaningful, and relatively safe. Students can share them without requiring advanced theoretical vocabulary or discussion of sensitive issues. The frequency of the knowledge code shows that the activity successfully created opportunities for cultural information exchange.

Internal shift was also strongly visible. Many students wrote not only about what they learned but also about how they felt or what they realized. Some students recognized that they needed to know more about their own culture in order to explain it to others. Others became more confident in speaking English or realized that perfect grammar was less important than willingness to communicate. Several reflections expressed motivation to

travel, study English harder, continue intercultural communication, or think differently about their future. These reflections suggest movement from external knowledge to self-awareness.

Attitudes were the third most frequent dimension. Students often expressed enjoyment, curiosity, interest, nervousness that decreased over time, and willingness to continue communication. Attitude is important because it shapes whether learners approach intercultural difference with openness or avoidance. The reflections suggest that many students found the exchange enjoyable and less intimidating than expected. Enjoyment alone does not equal intercultural competence, but it can create a foundation for further intercultural learning.

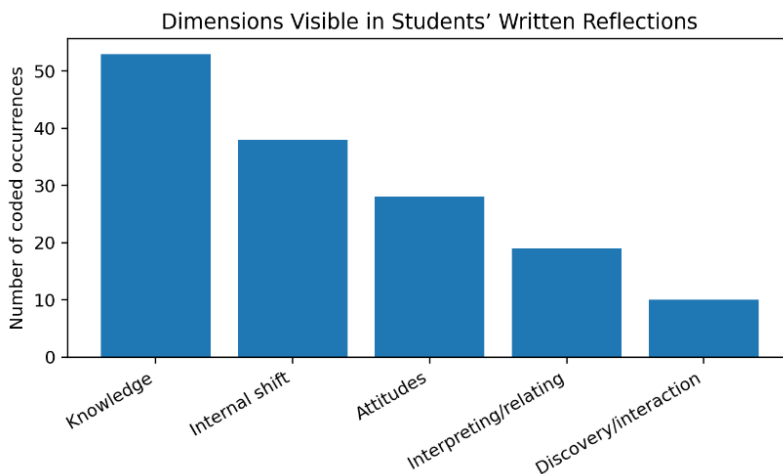
Interpreting and relating appeared less often than knowledge but still meaningfully. Students noticed similarities and differences across cultures, compared food practices, linked university experiences, and recognized that peers from different countries shared similar feelings or future concerns. This dimension is important because it shows that students were beginning to connect cultural information rather than simply list facts. For example, several students noticed both difference and similarity in food, education, dreams, or daily life.

Discovery and interaction strategies were the least frequent dimension. This category included evidence of students asking questions, adapting communication, overcoming language difficulty, using easier English, continuing communication through social media, or identifying interaction problems such as quiet peers or unstable connections. The low frequency suggests that students did not often explicitly reflect on how they communicated or how they solved interactional problems. This is a key finding because it shows a gap between participating in intercultural interaction and consciously analyzing the strategies needed for that interaction (see Figure 1).

The thematic interpretation of the coded reflections generated four overarching themes: (1) everyday cultural knowledge as an accessible entry point to intercultural learning, (2) cultural self-representation and confidence, (3) empathic recognition of similarity and difference, and (4) limited explicit awareness of strategic interaction. These themes were closely connected to the coding categories rather than separate from them. The first theme was mainly associated with the knowledge code, the second with internal shift, the third with interpreting/relating and empathy-related internal shift, and the fourth with the relatively low visibility of discovery/interaction. Together, these themes show that the exchange functioned effectively as an introductory intercultural encounter, while also indicating that students may need more explicit prompts to notice and describe how they negotiate meaning across cultural and linguistic differences.

Table 2*Frequency of Intercultural Competence Dimensions in Coded Reflections*

Dimension	Coded Occurrences	Percentage of Codes
Knowledge	53	35.8%
Internal shift	38	25.7%
Attitudes	28	18.9%
Interpreting/relating	19	12.8%
Discovery/interaction	10	6.8%

Figure 1*Coded Dimensions Visible in Student Reflections***Representative Qualitative Evidence****Knowledge:**

"I learned their country's culture. The most impressive thing is Malaysia airport having mosque. I felt the difference between Japanese culture and the others from religion point. (C06, Reflection 2)"

"I learned about the lifestyles of people from different countries. There were both similarities and differences, and it was really interesting to see how unique each culture is. (T07, Reflection 2)"

Internal Shift:

"I thought that I should know about Japan more to introduce my home country. (C10, Reflection 1)"

"Becoming more confident in talking about what I feel, and people will not judge you for how you talk. (M04, Reflection 3)"

Attitudes:

“It is very good to meet new people and new cultures. (T04, Reflection 1)”

“Everyone is getting comfortable to speak with each other. (M09, Reflection 2)”

Interpreting/Relating:

“There were both similarities and differences, and it was really interesting to see how unique each culture is. (T07, Reflection 2)”

“I learned the cultural differences between Japanese and Thai and Malaysia and also similarities between Thailand and Malaysia especially about the food. (M02, Reflection 1)”

Discovery/Interaction:

“I learned even if my English is not perfect, they understood what I wanted to talk about. It is important to convey my feeling and willingness. (C01, Reflection 1)”

“System connection problems and some people are too quiet. (T10, Reflection 1)”

The representative excerpts show that students’ intercultural learning was grounded in everyday topics. They learned about religion through the example of a mosque in a Malaysian airport, about Thai and Japanese food, about seasonal experiences, about university internships, and about future plans. These topics may seem ordinary, but everyday cultural exchange is often where students begin to notice difference and similarity. The reflections show that students were not engaging with culture as an abstract concept; they were engaging with people, stories, preferences, and practices.

The excerpts also show that the exchange supported self-awareness. A student who realized the need to know more about Japan in order to introduce their home country demonstrates a shift from outward curiosity to self-reflection. Another student who became more confident because others did not judge their speech demonstrates an affective and communicative shift. These examples help explain why the questionnaire showed gains in confidence and empathy. Students were learning that intercultural communication depends on shared effort, patience, and openness rather than flawless language performance.

The lower visibility of discovery and interaction strategies should not be interpreted simply as failure. It may reflect the design of the reflection prompts, which seemed to encourage students to report what they learned and how they felt rather than to analyze communication strategies. If future activities ask students more explicitly to describe how they asked questions, repaired misunderstanding, adapted language, or handled silence, this dimension may become more visible. Thus, the finding points to an instructional opportunity rather than a deficit in students.

Discussion

Positive Change in Confidence, Comfort, Empathy, and Self-Awareness

The quantitative findings align with recent empirical studies showing that virtual exchange can support intercultural competence, global awareness, and communication confidence when it is embedded in structured learning activities. The increase from 4.04 to 4.34 supports Hackett et al.'s (2023) finding that COIL can contribute to intercultural competence development in higher education and is consistent with Chu et al.'s (2024) report of positive effects of asynchronous virtual exchange on intercultural competence in an Asian university context. The finding also extends this literature by showing that even a short English-mediated exchange among Asian university students can produce measurable gains when accompanied by reflection. However, the large effect size should be interpreted cautiously because the sample was small and the pre-activity mean was already high.

The finding that students' effort to understand their own culture increased is theoretically and pedagogically significant. Intercultural competence is often misunderstood as knowledge about others, but Byram (1997, 2021), Deardorff (2006), and Chen and Starosta (2000) all emphasize the importance of self-awareness, sensitivity, and the ability to relate cultural perspectives. The present findings support this theoretical position by showing that students' intercultural learning turned inward: explaining one's own culture to international peers appeared to make students more aware of what they knew and did not know about their own cultural positioning. This extends previous virtual exchange research by emphasizing self-representation as a key outcome of short ELT-oriented exchange.

Empathy-related gains also support the argument that direct peer interaction can encourage perspective-taking. This finding is consistent with Deardorff's (2006) view of empathy as a desired internal outcome of intercultural competence and with Davis's (1983) distinction between perspective-taking and empathic concern. It also resonates with O'Dowd's (2021) analysis showing that students in virtual exchange report outcomes related to cultural awareness, communication, and self-reflection. At the same time, the present study supports Kinginger's (2009) caution that contact alone is insufficient. Empathy may have been strengthened here because interaction was followed by reflection, not simply because students met international peers.

The finding should still be interpreted as a moderate strengthening of already positive dispositions. Students began with high mean scores, particularly in respect for cultural difference and belief in common ground.

Therefore, the activity's contribution was not to introduce respect from zero, but to deepen confidence, comfort, and applied empathy. Keeping this distinction in mind is important for journal publication because it avoids overclaiming. The study shows meaningful improvement, but it does not claim that a short activity alone produces complete intercultural competence.

Knowledge as the Dominant Reflective Outcome

The most visible qualitative dimension was knowledge. This pattern is consistent with O'Dowd's (2021) finding that students often report learning outcomes related to cultural knowledge and everyday practices in virtual exchange. It is also compatible with Mestre-Segarra and Ruiz-Garrido's (2022) work showing that student reflections in COIL contexts can reveal cultural awareness and communication-related learning. In the present study, food, hobbies, university life, religion, tourist places, and future plans functioned as low-risk entry points for intercultural dialogue. This supports the pedagogical value of everyday topics in ELT exchange, especially for students who may be nervous about using English with unfamiliar peers.

However, the dominance of knowledge also raises a critical point that has been noted in virtual exchange scholarship: without careful task design, intercultural learning may remain at the level of cultural display or information exchange (Helm, 2015; O'Dowd & Ware, 2009). If students mainly exchange facts about national food, festivals, or tourist sites, they may not develop the interpretive and interactional skills emphasized by Byram (1997, 2021). The present findings therefore both support and qualify previous positive findings about virtual exchange. They support the claim that VE can promote cultural learning, but they qualify it by showing that knowledge was more visible than strategic discovery/interaction.

Knowledge should therefore be understood as a necessary starting point rather than an endpoint. Students need cultural information to have meaningful conversations, but they also need opportunities to ask why practices matter, how meanings differ across contexts, and how individuals vary within cultures. In future iterations of the activity, instructors could keep accessible topics such as food and hobbies while adding prompts that ask students to interpret meaning. For example, instead of asking only what food students like, a task could ask what family, religion, region, or memory means in relation to food.

Internal Shift as Evidence of Deeper Learning

Internal shift was the second most frequent code, which is one of the most promising findings of the study. This dimension indicates that students

did not only accumulate cultural facts but also reflected on themselves, their confidence, their English communication, their motivation, and their worldview. This result extends previous reflection-based research by showing how internal outcomes can appear in short, written post-exchange reflections. It also connects strongly with Deardorff's (2006) desired internal outcomes, including adaptability, empathy, flexibility, and ethnorelative perspectives.

The internal shifts were often modest and practical rather than dramatic. Students realized that they should study English harder, learn more about their own country, not hesitate to speak, or appreciate that others have similar dreams. These may appear small, but they are educationally meaningful. Intercultural competence develops gradually through repeated moments of noticing, comparison, and self-questioning. A student who becomes less afraid of imperfect English may be more willing to participate in future intercultural communication. A student who realizes that people in different countries share similar future concerns may become more open to perspective-taking.

The study therefore supports a developmental view of intercultural learning. Short-term exchange may not produce fully developed critical intercultural competence, but it can create initial internal shifts that prepare students for deeper learning. This is why reflection is important. Without reflection, students may enjoy the conversation and forget it. With reflection, they can identify what changed in their thinking and how they might act differently in future intercultural situations.

Limited Visibility of Discovery and Interaction Strategies

The least visible dimension was discovery/interaction. This finding is important because it diverges from the idealized view of virtual exchange as a space where students automatically develop strategic intercultural communication. Although questionnaire results showed improvement in communication adaptation, students' reflections rarely described specific strategies such as asking clarifying questions, repairing misunderstanding, checking understanding, or managing silence. This discrepancy extends current research by showing that perceived communication gains may not always be accompanied by explicit reflective awareness of interaction strategies.

There are several possible explanations. First, the activity may have emphasized cultural sharing more than collaborative problem-solving. When tasks focus on introductions and topic exchange, students may report what they learned rather than how they negotiated meaning. Second, students may have used communication strategies but not recognized them as worth writing about. Third, language proficiency may have limited their ability to

describe interactional processes. Fourth, reflection prompts may not have asked directly about misunderstanding, strategies, or communication repair.

This finding has clear pedagogical implications for ELT. If instructors want students to develop discovery and interaction skills, they should design tasks that require these skills and make them visible. For example, students could be asked to prepare follow-up questions before the exchange, identify one moment of confusion, explain how they clarified meaning, or write about one communication strategy they used. Such scaffolding would respond directly to the concern in virtual exchange research that online contact must be structured to promote deeper intercultural learning rather than only friendly cultural sharing (Dooley & Vinagre, 2022; Helm, 2015; O'Dowd & Ware, 2009).

The finding also helps explain a tension in the quantitative results. The questionnaire showed gains in communication adaptation, but the reflection data showed relatively few explicit discovery/interaction codes. This does not necessarily mean the data conflict. It may mean that students felt more able to adapt communication after the activity but did not describe the specific strategies in writing. Future studies could address this by adding interview questions, observation of recorded interactions, or reflection prompts focused specifically on interaction strategies.

Relationship Between the Two Research Questions

Taken together, the two research questions show a coherent but nuanced pattern. The questionnaire data demonstrate that students reported higher intercultural understanding and empathy after the activity. The reflection data show that the most visible forms of learning were cultural knowledge, internal shift, and attitudes, while discovery/interaction appeared least often. This integrated finding supports prior studies that present virtual exchange as beneficial for intercultural learning (Chu et al., 2024; Hackett et al., 2023; Heymans et al., 2024), but it also extends them by identifying the uneven distribution of learning across dimensions. In this sense, the study contributes to ELT by showing not only that students improved, but also what kind of intercultural learning was most visible in their reflective writing.

The integrated finding can be summarized as follows: short-term online intercultural exchange appears to move students from initial cultural sharing toward greater confidence and empathic awareness, but it does not automatically produce strong evidence of strategic intercultural interaction. This balanced conclusion avoids an overly celebratory interpretation of VE while still recognizing its value as an accessible ELT practice. It suggests that short exchange can produce meaningful but partial intercultural development, especially when it is connected to reflection.

This conclusion is aligned with current debates in virtual exchange research. Scholars increasingly argue that the quality of task design, reflection, facilitation, and assessment determines the depth of learning. The present study adds empirical support by showing that when students participate in short guided exchange, they report improvement and write about meaningful learning, but the dimensions most visible are those most directly supported by the activity design. If educators want deeper intercultural communication skills, they must design for them explicitly.

The thematic interpretation of reflections also clarifies why knowledge dominated the qualitative results. Everyday cultural knowledge created a safe entry point, cultural self-representation fostered confidence, empathic recognition connected similarity and difference, and limited strategic interaction revealed the need for stronger task scaffolding. These themes show that the reflections were not merely lists of codes; they represented a developmental pathway from noticing cultural content to recognizing personal and relational change.

Implications for Pedagogy

The findings suggest several practical implications for ELT pedagogy. First, short-term online exchange can be a valuable entry point for intercultural learning, especially where physical mobility is not possible. Even brief English-mediated conversations can increase students' confidence, comfort, and awareness when they are followed by reflection. Second, instructors should explicitly include cultural self-awareness as an outcome. Students should not only present national culture but also reflect on what they know, what they do not know, and how their own experience may not represent everyone in their country.

Third, reflection prompts should be strengthened. Instead of asking only what students learned, prompts should ask how they interpreted difference, what surprised them, what similarity they noticed, how they adapted communication, and what question they still have. Fourth, students should be prepared with interaction strategies before the exchange. They can practice asking follow-up questions, checking understanding, using examples, responding politely to unfamiliar ideas, and clarifying meaning when English proficiency differs across participants.

Finally, future intercultural exchange activities should include repeated contact when possible. The reflections suggest that comfort increased over time. Students who were nervous at first became more confident after additional interaction. Repeated contact allows students to move beyond introductions into more meaningful dialogue. When repeated sessions are not possible, instructors can deepen a short activity by using pre-

briefing, structured questions, post-exchange reflection, and follow-up discussion.

Implications for Research

For researchers, the study demonstrates the value of combining pre/post questionnaire data with coded reflection analysis. Questionnaire results can show change, but reflection data explain what kinds of learning were visible. Future research could extend this study by using a larger sample, a comparison group, recorded interaction data, interviews, or longitudinal follow-up. A larger sample would allow more robust statistical testing and subgroup comparison by university, language background, or prior intercultural experience.

Future studies should also examine whether reflection prompts influence which dimensions become visible. If prompts ask mostly about what students learned, knowledge will likely dominate. If prompts ask about communication strategies, discovery/interaction may become more visible. This means that reflection is not a neutral window into learning; it is shaped by the questions students are asked. Researchers should therefore report reflection prompts and coding procedures carefully.

Another direction is to examine critical cultural awareness more explicitly. The present data included some comparison and self-awareness, but limited evidence of critical analysis of power, inequality, stereotypes, or ethical judgment. This is understandable in a short introductory activity, but future projects could include carefully facilitated tasks that help students discuss cultural complexity without essentializing national identities.

Conclusion

This article examined how students' intercultural understanding and empathy changed after a short-term online intercultural exchange activity and which dimensions of intercultural competence were most visible in their written reflections. The findings show a significant positive change in students' self-reported intercultural understanding and empathy, with the composite mean increasing from 4.04 to 4.34. The strongest gains were in confidence introducing one's own culture, comfort discussing cultural topics, effort to understand one's own culture, empathy toward people from other cultures, and communication adaptation.

The qualitative findings showed that knowledge was the most visible dimension in students' reflections, followed by internal shift, attitudes, interpreting/relating, and discovery/interaction. The thematic interpretation further showed that students used everyday cultural knowledge as an entry

point, developed greater cultural self-representation and confidence, recognized similarity and difference empathically, and only occasionally made strategic interaction visible. This pattern is pedagogically important because it suggests that short-term online exchange can help students feel more confident and develop awareness, but it may require more explicit scaffolding if the aim is to develop deeper interactional strategies and critical intercultural competence.

The article concludes that short-term online intercultural exchange can be an effective and accessible ELT practice for promoting intercultural understanding, empathy, and self-awareness in higher education. However, the development of deeper intercultural competence requires intentional pedagogical design. Instructors should guide students not only to exchange cultural information but also to interpret meaning, compare perspectives, reflect on self and other, and practice strategies for communication across difference. With stronger scaffolding, short-term exchange activities can become powerful steps toward more sustained intercultural learning.

Limitations

The study has several limitations. The sample size was small, with 19 matched pre/post questionnaire responses and 23 coded reflection participants. The findings should therefore be interpreted as exploratory rather than generalizable. The questionnaire relied on self-report and was developed for the present study rather than validated through a full instrument-development process such as expert IOC rating, exploratory factor analysis, or confirmatory factor analysis. Students may also have rated themselves positively because they valued the activity or wished to present themselves as open-minded. The reflection data were limited by the prompts, students' English proficiency, and the brevity of some responses.

The study did not include a control group, recorded interaction analysis, or delayed post-test. The qualitative coding was also limited by the absence of multiple independent coders for the full data set, so future research should include formal inter-rater reliability procedures such as Cohen's kappa. Therefore, the study cannot determine whether the observed changes would persist over time or whether similar changes would have occurred without the activity. Future research should include larger samples, comparison groups, delayed measurement, more robust instrument validation, and analysis of actual interaction discourse. Despite these limitations, the mixed-methods design provides useful evidence of both measurable change and visible reflective dimensions of intercultural learning.

Acknowledgements

The authors would like to express sincere gratitude to Professor Dr. Shigenori Wakabayashi for his generous support in administering the participation of Japanese students in the project.

About the Authors

Samanan Sudsa-ard: A lecturer in English at the Language Institute, Thammasat University (LITU), Thailand. A Thai native with over 15 years of experience in language education, she holds a dual Bachelor's degree in TESOL from Khon Kaen University and Northern Arizona University, a Master's degree in English as an International Language from Chulalongkorn University, and a Ph.D. in Language Education from the University of Leeds, completed in January 2024. She specializes in vocabulary learning and acquisition, and her academic and professional interests include English language teaching, memory retention, vocabulary studies and assessment, EFL learning, and second language quantitative research.

Wimonnit Chaokongjakra: An Assistant Professor of English at the Language Institute, Thammasat University (LITU), Thailand, where she has been teaching since 2010. Her research interests include teacher professional development, teacher beliefs, students' and teachers' voices, EFL teacher education, communicative language teaching, corpus linguistics, and intercultural competence.

Loh Khai Xian: A Japanese language teacher at the Language Academy, Faculty of Social Sciences and Humanities, Universiti Teknologi Malaysia (UTM), Malaysia. He received a Bachelor of Engineering (Geomatics) and a Master of Science in Hydrography from Universiti Teknologi Malaysia (UTM), and a Master of Japanese Language Education from the National Graduate Institute for Policy Studies (GRIPS), Japan. His research interests include intercultural understanding, Japanese language education, and AI-assisted Japanese language learning.

References

- Byram, M. (1997). *Teaching and assessing intercultural communicative competence*. Multilingual Matters.
- Byram, M. (2021). *Teaching and assessing intercultural communicative competence*:

Revisited. Multilingual Matters.

- Bennett, M. J. (1993). Towards ethnorelativism: A developmental model of intercultural sensitivity. In R. M. Paige (Ed.), *Education for the intercultural experience* (2nd ed., pp. 21–71). Intercultural Press.
- Chen, G. M., & Starosta, W. J. (2000). The development and validation of the Intercultural Sensitivity Scale. *Human Communication*, 3, 1–15.
- Chu, C., Hooper, T., Takahashi, M., & Herke, M. (2024). The effect of asynchronous virtual exchange on intercultural competence among undergraduate students. *Journal of Comparative & International Higher Education*, 16(2), 213–226.
<https://doi.org/10.32674/jcihe.v16i2.5229>
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44(1), 113–126.
<https://doi.org/10.1037/0022-3514.44.1.113>
- Deardorff, D. K. (2006). Identification and assessment of intercultural competence as a student outcome of internationalization. *Journal of Studies in International Education*, 10(3), 241–266.
<https://doi.org/10.1177/1028315306287002>
- Dooly, M., & Vinagre, M. (2022). Research into practice: Virtual exchange in language teaching and learning. *Language Teaching*, 55(3), 392–406.
<https://doi.org/10.1017/S0261444821000069>
- Godwin-Jones, R. (2019). Telecollaboration as an approach to developing intercultural communication competence. *Language Learning & Technology*, 23(3), 8–28. <https://doi.org/10.64152/10125/44691>
- Hackett, S., Janssen, J., Beach, P., Perreault, M., Beelen, J., & van Tartwijk, J. (2023). The effectiveness of Collaborative Online International Learning on intercultural competence development in higher education. *International Journal of Educational Technology in Higher Education*, 20, Article 5.
<https://doi.org/10.1186/s41239-022-00373-3>
- Helm, F. (2015). The practices and challenges of telecollaboration in higher education in Europe. *Language Learning & Technology*, 19(2), 197–217.
<https://doi.org/10.64152/10125/44424>
- Heymans, Y., Strosnider, C., Pool, J., & Jansen van Vuuren, M. (2024). Fostering intercultural competence through virtual exchange: Perspectives of undergraduate health students. *Open Praxis*, 16(2), 119–129. <https://doi.org/10.55982/openpraxis.16.2.607>
- Kinginger, C. (2009). *Language learning and study abroad: A critical reading of research*. Palgrave Macmillan.
<https://doi.org/10.1057/9780230240766>

- Lee, L., & Markey, A. (2014). A study of learners' perceptions of online intercultural exchange through Web 2.0 technologies. *ReCALL*, 26(3), 281–297. <https://doi.org/10.1017/S0958344014000111>
- Lewis, T., & O'Dowd, R. (Eds.). (2016). *Online intercultural exchange: Policy, pedagogy, practice*. Routledge.
- McAllister, L., Whiteford, G., Hill, B., Thomas, N., & Fitzgerald, M. (2006). Reflection in intercultural learning: Examining the international experience through a critical incident approach. *Reflective Practice*, 7(3), 367–381. <https://doi.org/10.1080/14623940600837624>
- Mestre-Segarra, M. A., & Ruiz-Garrido, M. F. (2022). Examining students' reflections on a collaborative online international learning project in an ICLHE context. *System*, 105, Article 102714. <https://doi.org/10.1016/j.system.2021.102714>
- O'Dowd, R. (2018). From telecollaboration to virtual exchange: State-of-the-art and the role of UNICollaboration in moving forward. *Journal of Virtual Exchange*, 1, 1–23. <https://doi.org/10.14705/rpnet.2018.jve.1>
- O'Dowd, R. (2021). What do students learn in virtual exchange? A qualitative content analysis of learning outcomes across multiple exchanges. *International Journal of Educational Research*, 109, Article 101804. <https://doi.org/10.1016/j.ijer.2021.101804>
- O'Dowd, R., & Ware, P. (2009). Critical issues in telecollaborative task design. *Computer Assisted Language Learning*, 22(2), 173–188. <https://doi.org/10.1080/09588220902778369>
- Zhou, R., Samad, A., & Perinpasingam, T. (2024). A systematic review of cross-cultural communicative competence in EFL teaching: Insights from China. *Humanities and Social Sciences Communications*, 11, Article 1750. <https://doi.org/10.1057/s41599-024-04071-5>
- Zuo, L. (2025). Development of intercultural competence in higher education through online learning: A systematic review 2020–2024. *Journal of Teaching in International Business*, 36(1), 33–58. <https://doi.org/10.1080/08975930.2025.2475755>

Appendix A. Questionnaire Items Used in the Composite Analysis

Item	Statement
1	I am familiar with cultures outside my own.
2	I often interact with people from different cultural backgrounds.
3	I feel confident introducing my own culture to others.
4	I make an effort to understand my own culture.
5	I make an effort to understand other cultures.
6	I am genuinely interested in learning about cultures different from my own.
7	I feel comfortable interacting with people from diverse cultural backgrounds.
8	I believe that understanding different cultural perspectives is important for building strong relationships.
9	I try to empathise with people from other cultures when I learn about their challenges.
10	I can adjust my communication style when interacting with people from different cultures.
11	I enjoy hearing personal stories from people of other cultures.
12	I feel it is important to respect cultural differences, even if they differ from my own beliefs.
13	Learning about other cultures helps me understand my own culture better.
14	I feel comfortable discussing cultural topics, even when they are sensitive or unfamiliar.
15	I believe people from different cultures can find common ground despite their differences.
16	I am empathetic toward people who are different from me.
17	I am willing to change my opinions after hearing new perspectives from other cultures.
18	I am interested in learning about the challenges people face in other cultures.
19	I find it rewarding to connect with people from diverse backgrounds.
20	I am open to adjusting my behaviour to avoid cultural misunderstandings.
21	I sometimes find it difficult to accept cultural values that are very different from my own.
22	I feel uncomfortable when someone criticises my culture in intercultural discussions.
23	If another culture's values contradict my own beliefs, I still believe they deserve equal respect.
24	I accept that everyone has the right to follow their own culture, even if it differs from mine.
25	Empathy: My ability to understand and share the feelings of people from different cultures.
26	Openness: My willingness to consider perspectives different from my own.
27	Communication: My ability to adapt my communication style when talking with people from other cultures.
28	Cultural Awareness: My understanding of cultural differences and similarities.
29	Respect for Diversity: My respect for diverse cultural practices and beliefs.

Appendix B. Coding Scheme for Written Reflections

Code	Represents	Keywords
ATT: Attitudes	The "Heart." Openness, curiosity, and managing anxiety.	Excited, nervous, fun, happy, willing, interest, better than I thought, friendly.
KNOW: Knowledge	The "Head." Factual info about the other culture or your own.	Learned, food, anime, religion, weather, education, future plans, similarity, difference
SKILL-INT: Interpreting	The "Bridge." Comparing and relating without judging.	Compare, unlike, similar to Malaysia, differently, in my country we..., whereas in Japan...
SKILL-DISC: Discovery	The "Tool." Strategies used to communicate or find info.	Asked questions, used gestures, simplified my English, translator, search, found out.
SHIFT: Internal Shift	The "Change." Evidence of empathy or a new worldview.	Matured, realized, my way isn't the only way, perspective, future, global, changed my mind.