

## **The Impact of Virtual Exchanges Using English as a Lingua Franca on Students' Linguistic and Intercultural Competence**

November 2024 – Volume 28, Number 3

<https://doi.org/10.55593/ej.28111a1>

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### **Abstract**

We created an eight-week virtual exchange (VE) programme called the Virtual Culture Trip which enabled 68 students from seven countries to engage in online intercultural interaction under the guidance of educators. This study investigated participants' perceived language skill improvement and intercultural competence (IC) after the programme, the change in their interest in the VE discussion topics, and the relationship between their self-perceived improvement and background factors. Quantitative and qualitative analyses were conducted on data obtained from the pre- and post-surveys of 48 students. Results showed that participants believed that their language skills and the four IC constructs (i.e., knowledge, attitudes, awareness and skills) significantly improved. They also seemed to become more interested in the discussion topics. Some statistically significant differences were observed in the abilities to use the language between males and females and these differences might also be associated with the interaction between gender and prior VE experience. Moreover, the interaction between age and English level led to statistically significant differences in their perceived development of intercultural skills. The study shed light on how VE conducted through English as a Lingua Franca can be an enabling means to facilitate interactions across Global North and Global South countries despite challenges posed by geographical immobility due to resource limitations or a global pandemic.

**Keywords:** Telecollaboration, Virtual Exchange, Collaborative Online Intercultural Learning, Intercultural Competence, English as a Lingua Franca

Owing to the interconnectedness of global societies, it is crucial to be able to communicate and cooperate with people from culturally and linguistically diverse backgrounds (Pitts & Brooks, 2017; Yeh & Heng, 2022). This has resulted in a new model of teaching students to become “intercultural speaker[s]” (Byram, 1997) who are willing to “suspend disbelief about other cultures and belief about ones’ own” (p. 57) and are able to help interlocutors holding diverse cultural perspectives, values or beliefs overcome “conflicting interpretations of phenomena” (p. 52). Technological advances have enabled learners living in various parts of the globe to be involved in authentic communication. Virtual Exchange (VE), video synchronous computer mediated communication (VSCMC), and Collaborative Online Intercultural Learning (COIL) are terms used to refer to the engagement of groups of learners in online intercultural interactions and collaboration projects with partners from other cultural contexts or geographical locations under the support and guidance of educators (O’Dowd, 2018). Since English is “the principal language medium of globalizing processes” (Jenkins et al., 2011, p. 303), English as a Lingua Franca (ELF) plays a pivotal role in the context of increasing intercultural encounters.

Teaching English in a monolingual Global South country<sup>[1]</sup>, we tried various approaches to create more opportunities for English as a foreign language (EFL) learners to use the language and exchange cultures. After learning about the traditional bilingual mode of VE, we quickly encountered difficulties finding partners from English speaking countries because of native speakers of English’s limited need to partake in culture and language exchanges with English learners. We then decided to lead an 8-week VE programme entitled Virtual Culture Trip (VCT) in the hope of helping those who do not speak English as their first language improve their English and Intercultural Competence (IC). Although the impacts of VE on learning outcomes, especially on gains in language and IC, have been widely discussed (Dooly & Vinagre, 2022), the research has been “narrowly focused on Western cultural contexts” (Yeh & Heng, 2022, p.2). Moreover, there has been a paucity of VE projects using a lingua franca in synchronous interactions (Akiyama & Cunningham, 2018). Therefore, we decided to create such a VE programme and look at the development of the participants’ linguistic competence and IC after the transnational VE programme, in which English as a Lingua Franca (ELF) was used by English learners from a range of countries, especially with the involvement of students from Global South contexts and of various levels of English. This study aims to evaluate participants’ perceived improvement of foreign language learning and document their perceived development of IC after the VE programme.

## **Virtual Exchange**

The Internet and the development of its communication tools have enabled foreign language learners to have first-hand experience encountering users of the language elsewhere (Furstenberg, 2010). Quite a few terms have been used to refer to the practice of connecting geographically distant students, they include, Computer Mediated Communication (CMC), eTandem, Collaborative Online International Learning (COIL), telecollaboration, online intercultural exchange, and many more (Hagley, 2020b). According to O’Dowd (2016), there are two principal VE approaches in the teaching and learning of foreign languages, namely e-tandem and telecollaboration. In the first model, communication takes place between two native speakers of different languages to help each other practise their target language with half

of the communication in the target language and half in the mother tongue (O'Rourke, 2007). As peer tutors, e-tandem partners are expected to provide feedback on each other's content and language performance. It means that the success of an e-tandem mainly relies on learners and the focus is placed on developing communicative competence (O'Dowd, 2020). The second model, however, involves international partnership between classes under the close collaboration between teachers and focuses on developing intercultural communicative competence (ICC). Like e-tandem, traditional approaches of telecollaboration have been bilingual-bicultural, which has several limitations (O'Dowd, 2020). First, it is evident that those based in countries speaking less popular languages tend to find it more challenging to find partners learning their languages (Hoffstaedter & Kohn, 2015; O'Dowd, 2020). Although Kato et al. (2016) show how partners who are already learning each other's language can overcome such a challenge, there are far fewer English native speakers who learn various L2s than EFL learners. Therefore, partners can still be difficult to find. Second, English is frequently used in most of the intercultural communication (Baker, 2015) between non-natives rather than between non-native and native speakers (Graddol, 2006). An alternative model of VE using ELF, therefore, has been proposed (O'Dowd, 2020) and the VCT is a programme of this model.

### **Developing IC and Linguistic Competence through VE**

IC is "the complex of abilities" someone needs to be able to interact with others from different linguistic and cultural backgrounds in an effective and appropriate manner (Fantini, 2006, p. 12). Physical (geographical) mobility has been recognised as one of the tools to foster the development of language and intercultural learning (Helm & Acconcia, 2019). However, even when such mobility programmes exist in Europe through the Erasmus scheme, only 20% of tertiary students could study and train abroad, let alone students in less well-resourced contexts. This necessitates "more inclusive programmes" (Helm & Acconcia, 2019, p. 212), which provide learners from a wider range of backgrounds with equal access to international experiences at no extra cost (Çiftçi & Savaş, 2018). The Internet has been employed to give foreign language (FL) learners first-hand experience of interacting and collaborating with users of the language somewhere else and VE has been recognised as "the most common approach to providing intercultural experience and learning to students" (Godwin-Jones, 2013, p. 1).

Many studies have found that VE helps learners develop their overall language skills (Schenker, 2012a, b), and aspects of IC (Chun, 2011; Hagley, 2020a; O'Dowd & Lewis, 2016;; Uzum et al., 2020). Abundant research has also revealed that VE brings about positive learning experiences thanks to the opportunities for "geographically-distanced learning partners" (Dooly, 2022, p. 1) to be engaged in lively and authentic interaction with each other (Çiftçi & Savaş, 2018). Some view it as an eye-opening (Helm & Beaven, 2020) and enjoyable experience (Angelova & Zhao, 2016). Despite ample evidence of VE's great potential for positive learning outcomes, there have also been some opposing views regarding its impacts and some aspects of simple VE, e.g., not providing adequate academic challenges (O'Dowd & Lewis, 2016; Ware & Kramsch, 2005). It is clear that "linguistic and intercultural gains are by no means automatic" (Godwin-Jones, 2019, p. 8) and that VE practitioners need to design online tasks and interaction carefully and provide required scaffolding so that learners can benefit from their VE participation (Hauck & Youngs, 2008; O'Dowd & Waire, 2009). For example, Spring et al. (2019) found that one of the outcomes of the VE (i.e., increased oral fluency) was associated with different factors such as instructional level, participants' engaged

speaking time, and their reasons for enjoying the VE programme. Teachers should also be aware that beginners might just simply turn the exchange from written form into “the form of spoken chat” when engaging in online meetings (Ware & Kramersch, 2005, p. 199). However, participating in VE makes English learning more interesting (Hagley & Thomson, 2017), more engaging and real (Hagley, 2020a), more meaningful (O’Dowd, 2018), and hence increases learners’ motivation (Canals, 2020) and confidence in their abilities to communicate with people from linguistically and culturally diverse backgrounds (Çiftçi & Savaş, 2018). Wang and Devitt (2022) have also conducted a systematic review suggesting several affordances and limitations of VE in certain contexts.

### **Factors affecting the development of IC and linguistic competence**

There are different internal and external factors that might impact the development of IC and the learning of a second language. Kohli Bagwe and Haskollar (2020), in their systematic literature review, have found 11 variables and two sub-variables affecting the IC growth. These variables are categorised into (1) programme characteristics and (2) demographic characteristics, some of which include gender, age and linguistic capability. Although many did not find a significant relationship between gender and IC (El Ganzoury, 2012; Kobayashi, 2009; Tinkham, 2011), others argued that males are more ethnocentric, and less effective in adapting themselves to different intercultural encounters (Chen, 2008; Lai, 2006). Some studies’ findings indicated that females made greater gains than their male counterparts (Nichols, 2011; Rexeisen and Al-Khatib, 2009) while Warell (2009) found that the former made lesser gains than the latter after their intercultural experience. Concerning the relationship between age and IC, different studies yielded varied conclusions. While no association was found in several studies (El Ganzoury, 2012; Kruse et al., 2014; Pierson, 2010; Tinkham, 2011), some others did find a correlation between age and IC development. For example, Warell (2009) showed that younger participants made greater improvement in IC while the opposite was proved to be true by Kobayashi (2009) and Steuernagel (2014). Regarding language proficiency, although there was no significant quantitative relationship between this factor and IC growth found in Lai (2006), Park (2006), and Chen (2008), the last research’s qualitative data revealed that language level was positively associated with IC. Huang (2021) also found a significant relationship between English proficiency and the development of knowledge and skills aspects of IC. Although language proficiency has not been identified as a key factor in many ICC models, its importance has been acknowledged (Fantini, 2009) with it being listed as a contributor to IC (Arasaratnam, 2016).

Language proficiency is also a variable associated with linguistic competence development of those participants involved in VE programmes. For example, Lin (2014) found that VE participants with lower level of target language (i.e. elementary) made greater progress than intermediate or advanced proficiency participants. However, Spring et al. (2019) indicated that learners with higher proficiency level tend to exhibit greater improvement in oral fluency.

Some variables that have been assumed to play a role in language teaching and learning include “the role of the first language, setting differences and the role of instruction, age differences, individual learner differences and gender differences” (Shehadeh, 1999, p. 256). Important studies have been done to investigate the extent to which individual differences may influence the way learners learn a second language and their various levels of success (Larsen-Freeman, 2018). The results of these studies can offer teachers insights into comprehensible input and output, which enables them to enhance their learners’ language learning. Larsen-Freeman

(2018) emphasises that “[it] is no exaggeration to state that more than 100 dimensions in which learners differ have been identified” and more variables are expected to be added to the list in the future (p. 59).

Previous research has found that age and gender are two of the factors leading to second language learners’ differential success. In terms of age, although “the precise nature” of the relationship between this factor and the success in the learning of an additional language is still controversial, the existence of this relationship is “undeniable” (Muñoz & Singleton, 2011, p. 1). Several empirical studies (Cenoz, 2002; García Mayo & García Lecumberri, 2003; Muñoz, 2010) have showed that young learners might greatly benefit from significant exposure to authentic target language environment while older learners might benefit from formal foreign language learning environment (Hyland & Hyland, 2019). In terms of gender, empirical research has found some gender-related differences regarding “the negotiation of meaning, dominance, interpersonal relations, and opportunities for comprehensible input and output” (Shehadeh, 1999, p. 257) when both men and women are involved in interactions between native speakers and non-native speakers (Pica et al., 1989) or between non-native speakers and non-native speakers (Gass & Varonis, 1986). In addition, when dealing with mixed-gender tasks, males tend to utilise the conversation to develop their productive skills while females are likely to use it to improve their receptive skills (Shehadeh, 1999). A study using a database of 27,119 Dutch adult learners showed that females performed better when it comes to speaking and writing (van der Slik, van Hout, & Schepens, 2015). Furthermore, gender seems to have an influence on language learning strategies with female learners employing more of them than their male counterparts (Montero-Saiz Aja, 2021).

Another factor that might impact second language development is task repetition. Task repetition refers to when the same or slightly different task is repeated (Bygate & Samuda, 2005) with the first performance of the task viewed as a preparation for the subsequent task performances (Ellis, 2009). According to Patanasorn (2010), there are three types of repetition, namely exact task repetition (i.e., same content is repeated following the same task procedure), procedural repetition (i.e., same procedure is repeated using different content) and content repetition (i.e., same content is repeated following different procedure). Many empirical studies have indicated that this variable is positively correlated with the increase in various aspects such as fluency and complexity (Bygate, 2001); accuracy (Carver & Kim, 2020); lexical complexity (Gass et al., 1999); self-correction of lexical and grammatical forms (Hawkes, 2012) and overall second language performance development (Kartchava & Nassaji, 2019) (see more impacts of task repetition in Khezrlou, 2021). In this present study, learners’ participation of previous VE (if any) with same/vaguely altered content or procedure or both repeated might be seen as a preparation for their performance of the present VE programme (i.e., Virtual Culture Trip). Moreover, participating in VE experience is believed to be one of the very few ways for those learners who live in monolingual and monocultural contexts to have domestic or international intercultural encounters. Previous VE experiences, hence, can be considered previous intercultural experiences, which are listed as one of the variables impacting IC development (Kohli Bagwe & Haskollar, 2020). Although Lai (2006), Kruse et al. (2014), and Raabo (2011) found a negative correlation between these two, the opposite was proven by many others (e.g., El Ganzoury, 2012; Palsa, 2010; Steuernagel, 2014).

The disagreement in the impacts of age, gender and language proficiency on growth in IC and linguistic competence highlights the need for more empirical evidence on their relationships,

especially in the context of a VE programme. Also, there is a lack of research looking into the impacts of previous VE experience on the development of language and IC. Therefore, we aim to investigate if age, gender, English level or prior VE experience could be the determinants of learners' perceived IC and linguistic development after the VCT programme.

## **Research questions**

While the growing body of literature has enhanced our knowledge about students' development of intercultural and linguistic competence through their VE participation, existing studies have mostly focused on participants from western, often better resourced countries (see the IVE project for an exception: <https://iveproject.org/>). The present study aims to extend our understanding about the impacts of VE using ELF in both synchronous and asynchronous modes of interactions by involving students of various English levels (i.e., from pre-intermediate to advanced) from different countries (i.e., Vietnam, Poland, Turkey, Belarus, Taiwan, Egypt and Mongolia) without relying on native speakers. We are also interested to explore if and how students' interest in the discussion topics will change since it might be an indication of the impact of the programme. Specifically, we set out to address the following research questions:

RQ1: What impact do English learners perceive the 8-week VE programme to have on their language skills and IC?

RQ2: Did students' interest in any of the discussion topics change as a result of the VE programme?

RQ3: What factors (i.e., age, gender, self-perceived English level or previous VE experience) appear to be significant in determining the learners' perception on their linguistic and IC improvement?

## **Methodology**

### **Participants and Context**

We decided to create a VE programme based on a syllabus comparable to a normal language classroom with a focus on current events to make it relevant to learners. The programme invitation was sent to teachers of English and English learners from different countries through the authors' personal network and social media. More than 100 teachers and students from 16 countries were involved in at least one activity of the VCT programme with 68 students from seven countries, namely Vietnam, Poland, Turkey, Belarus, Taiwan, Egypt, and Mongolia initially registering and participating until the completion of the VCT. Although the students' participation rate was sustainably high with around 60 attending each online meeting, only 48 students using ELF in the programme agreed to participate in the research. Therefore, the analysis focused on the data of those 48 respondents (31 females and 17 males). Student ages ranged from 15 to 37 and their English proficiency ranged from A2 (pre-intermediate) to C1 (advanced) with most being A2 and B1 learners based on their defined level of English at school or their (local) standardised English test scores (e.g., TOEIC, Cambridge Key English Test, General English Proficiency Test - Taiwan) reported in their pre-survey responses. 25 participants had no previous VE experience while 23 of them did (see Table 1 for more participant information).

**Table 1. An overview of participant profiles**

		Gender		Total count
		Female	Male	
Countries	Belarus	6	1	7
	Egypt	7	2	9
	Mongolia	1	2	3
	Poland	3	2	5
	Taiwan	4	3	7
	Turkey	6	0	6
	Vietnam	4	7	11
English level	A2	10	1	11
	B1	19	12	31
	B2	0	3	3
	C1	2	1	3
Age	15-18	26	10	36
	19-23	0	6	6
	24-29	1	0	1
	30-35	2	1	3
	>35	2	0	2
Experience of VE before	No	14	11	25
	Yes	17	6	23

For the two months, student participants were required to communicate on a weekly basis in both synchronous (90-minute videoconferencing on Zoom and Microsoft Teams) and asynchronous (writing on the discussion board Padlet and speaking on the video-based platform Flipgrid) ways. Specifically, for each week, students were provided with some guiding questions about one topic and were requested to write their answers on Padlet before the meeting. Every Saturday, they had the chance to discuss the topic with other international students. After each Saturday chat, students were requested to reflect on their own learning on Flipgrid. Table 2 below illustrates the weekly topics, goals, activities, and technologies used in the VCT project. We wish to clarify that the programme was not designed based on IC theory, but instead to mirror the usual syllabus that English learners expect to see in their classrooms. However, IC was used as the theoretical anchor for interpreting our data.

**Table 2. An overview of the VCT activities.**

Week	Topic	Activities	Objectives	Technologies
1	Getting to know you	Writing: self-introduction Online meeting (Saturday chat): + Two truths and a lie: Small talk Reflective video	To prepare the ideas on the topic for the online meeting To break the ice To get to know each other To improve communication skills	Padlet Flipgrid Zoom Mentimeter
2	Daily life (amidst Covid-19 pandemic)	Writing about daily lives during the pandemic Online meeting (Saturday chat): + Discussion; Presentation Reflective video	To prepare the ideas on the topic for the online meeting To feature the changes of daily life amidst the Pandemic To learn about life during the Covid 19 time around the world To improve communication skills	Padlet Flipgrid Zoom Mentimeter
3	Hobbies, leisure, and entertainment	Writing about the topic Online meeting (Saturday chat): + Talent show; Discussion Reflective video	To prepare the ideas on the topic for the online meeting Show participants' talents and share stories around it. To cheer everybody up during the global pandemic time To exchange information about their leisure activities	Padlet Flipgrid Zoom Mentimeter
4	Travel and holidays	Writing about the topic Online meeting (Saturday chat): + Presentation; Group discussion; Q&A Reflective video	To prepare the ideas on the topic for the online meeting To introduce famous tourist destinations of each country To improve presentation and communication skills	Padlet Flipgrid Zoom Mentimeter
5	Food	Writing about the topic Online meeting (Saturday chat): + Traditional food and drink presentations; Group discussion; Q&A; Idiom challenge Reflective video	To prepare the ideas on the topic for the online meeting To present and understand about traditional foods and drinks around the world To improve communication skills To learn idioms about food	Padlet Flipgrid Microsoft Teams Mentimeter
6	Social life (family/friends)	Writing about the topic Online meeting (Saturday chat): + Group discussion; Q&A; Idiom race Reflective video	To prepare the ideas on the topic for the online meeting To talk about family and friends To learn idioms about friends and family	Padlet Flipgrid Microsoft Teams Mentimeter
7	Job/Work/Study	Writing about the topic Online meeting (Saturday chat): + Job presentation; Group discussion; Q&A Reflective video	To prepare the ideas on the topic for the online meeting To talk about jobs and study To learn about traditional jobs and strange jobs in the countries	Padlet Flipgrid Microsoft Teams Mentimeter
8	Gala show	Online meeting (Saturday chat): + My top Five; Feedback time Reflective video	To reflect on the programme experience To celebrate the success of the project	Microsoft Teams Mentimeter Flipgrid

### Evaluating I

In order to evaluate and define IC, we rely heavily on the field of intercultural education and FL education. Specifically, we employ Byram's ICC model (1997), as it has become highly influential since its inception (East et al., 2022). His model consists of linguistic, sociolinguistic, discourse and intercultural dimensions. IC refers to the essential characteristics of an ideal "intercultural speaker" as follows:

- attitudes: "curiosity and openness, readiness to suspend disbelief about other cultures and belief about one's own" (p. 57),



- knowledge: “knowledge of social groups and their products and practices in one’s own and in one’s interlocutor’s country, and of the general processes of societal and individual interaction” (p. 58), which is summarised by Schenker (2012b) as “knowledge of self and other” (p. 450),
- skills: skills of interpreting and relating; and skills of discovering and interaction,
- critical cultural awareness.

One of the main reasons for the popularity of Byram’s model might be because he specifies objectives for each construct, which gives teachers guidelines to plan, implement, and evaluate their intercultural teaching. However, those who are not used to teaching interculturality might find this thorough list of objectives overwhelming (Schenker, 2012a). Fantini’s framework (2000), which is less specific, might be of significant help to those who aim to improve their students’ IC “without worrying about multifarious objectives given in Byram’s model” (Schenker, 2012a, p. 74). Fantini (2000) outlines five components, namely attitude, awareness, knowledge, skills, and language proficiency, which overlap with Byram’s. Nevertheless, unlike awareness in Byram’s model which refers to “ability to evaluate, critically and on the basis of explicit criteria, perspectives, practices and products in one’s own and other cultures and countries” (1997, p. 63), awareness is described by Fantini (2000) as self-awareness and reflection. This results in “deeper cognition, skills, and attitudes just as it is also enhanced by their development” (p. 29), which was what the authors aimed at. Fantini’s model is also believed to leave more room for teachers to decide “what knowledge and skills to foster and how to improve attitudes and awareness” (Schenker, 2012a, p. 74).

Based on the above discussion, we employed the Assessment of Intercultural Competence (AIC), a self-assessment tool developed based on Fantini’s five factors (2000). This survey was created based on the results of reliability testing of inter-item consistency and Principal Component Analysis conducted by the Federation of the Experiment in International Living (Fantini, 2006). It is widely trusted for this purpose and has been adopted in eight countries across three continents (Fantini, 2020), which motivated us to use it in this study as well.

The theories above underlie the analysis of the students’ self-perceived changes in different components of IC after their participation in the VCT. General descriptions of the constructs of attitude, knowledge, and skills in Byram’s model and of the constructs of knowledge and awareness in Fantini’s work were used to help the authors generate potential themes for the qualitative data analysis.

### **Data collection**

The participants were informed that the VE programme was part of a research project, and this was clearly restated in the introduction section of the pre-survey and post survey. They were reminded that both participating in this exchange and completing the surveys were completely optional, and they were not graded on the project. They could withdraw from the VE at any point, no one did. Data were collected from surveys, Padlet writing, and reflective Flipgrid videos. Nevertheless, data from Padlet writing and Flipgrid videos was used only to help triangulate the students’ responses in the surveys where relevant.

**Pre-survey.** The students were asked to complete the initial survey prior to the VE. The pre-survey consisted of two main parts. The first part asked demographic questions, students' language competence and experience in participating in telecollaborative exchanges while the second part asked them to indicate their preferences towards a list of possible topics and suggest some topics of their interest to be included in the VE.

**Post-survey.** Students completed the post-survey after the last Saturday Chat. The post-survey required students to self-assess the improvement of their language skills (11 items); attitudes (7 items), awareness (7 items), skills (10 items), knowledge (7 items) concerning the learning of English language and cultures. Students rated their agreement with the statements using a 1 (strongly disagree) to 5 (strongly agree) scale. This part of the survey is an adapted version of Fantini's AIC (2000).

Furthermore, six open-ended questions provided students with the chance to give feedback on the language and culture learning happening during the telecollaboration.

## Data analysis

A concurrent mixed method was employed with quantitative and qualitative analyses conducted (Creswell, 2009) on the data obtained from the surveys of 48 students. Quantitative data was analysed using SPSS 28. We first examined the internal consistency of the 42 closed items of the responded post survey. We used McDonald's Omega to check for reliability of the measures due to several assumptions required for using Cronbach's alpha that could not necessarily be met in this study (Field, 2009; Hayes & Coutts, 2020; McNeish, 2018). The initial results were: .911 (ability to use foreign language), .825 (attitudes), .863 (awareness), .748 (skills), and .613 (knowledge). Although there are no cut-off criteria because researchers are recommended to contextualise their reliability measurement (Lance et al., 2006), the reliability of .70 seems to be the lowest acceptable value (Nunnally & Bernstein, 1994). Therefore, items K4 (I know some techniques to maximize my learning of English language and different culture), K5 (I can explain at least one definition of culture), and K7 (I can articulate the general history and some sociopolitical factors which have shaped my own and other cultures) had been removed, increasing the McDonald's Omega of the items belonging to the construct of knowledge to .742, before the subsequent statistical analyses were carried out. All the quantitative results presented in the later part of this paper excluded those of these three items, making it 39 items to report on.

In order to answer research question 1, we check the descriptive results of each category and question, and triangulate using the qualitative data. The qualitative data was analysed using the thematic analysis method, consisting of six phases (Braun & Clarke, 2006). The qualitative data was first analysed by the third author and then sent to the first author for checking. The first author agreed with most of the themes except for the one about awareness which, as initially coded by the third author, consisted of only one theme of *cultural awareness*. This intercoder disagreement was discussed between these two coders, which led to the refinement of the coding frame. Accordingly, the construct of awareness was divided into three themes, namely *awareness of differences*, *awareness of similarities*, and *awareness of importance of understanding self*. A top-down approach based on relevant categories of attitudes, knowledge, skills, and awareness from Fantini's AIC and Byram's model was adopted when it comes to analysing students' IC development. A bottom-up approach was adopted when it comes to coding students' responses regarding their perceived linguistic development and the IC

instances that did not fit any of the categories listed by either Byram or Fantini (see Table 3 for details of the themes, operationalisation of the correspondent framework and analysis approach). The intercoder reliability agreement was around 92%, which is higher than the standard agreement of 80% on 95% of codes suggested by Miles and Huberman (1994).

**Table 3. An overview of qualitative data analysis approaches.**

Constructs	Themes	Operationalisation	Framework and/or analysis approach
Language learning	Speaking fluency	Comments on Saturday chats and their speaking skills and fluency	Bottom-up approach
	Listening comprehension	Comments on their abilities to understand spoken English	
	Writing skills	Comments on Padlet writing activities and their writing skills	
	Vocabulary expansion	Expression of them knowing more words and expressions	
	Confidence enhancement	Expression of them more confidently speaking English and/or not being afraid of making mistakes	
Attitudes	Curiosity and openness	Expression of curiosity and willingness to learn about other cultures	Byram's model
	Readiness to suspend disbelief about other cultures	Expression of readiness to change their presuppositions about other cultures	
Knowledge	Knowledge of others	Comments on what they know about other cultures	Byram's model
	Knowledge of self	Comments on what they know about their own cultures	
	Knowledge of ways of learning the language	Comments about effective ways of learning English	Fantini's framework
Skills	Abilities to interact	Expression of realisation that they can use in real-time knowledge, skills, and attitudes for mediation between interlocutors	Byram's model
Awareness	Awareness of differences	Expression of realisation that they have expanded their knowledge of the diversity in the world	Fantini's framework
	Awareness of similarities	Expression of realisation that different cultures share certain common features	Bottom-up approach
	Awareness of importance of understanding self	Expression of realisation that it is vital to understand their own cultures before any intercultural encounter.	

To answer research question 2, the non-parametric Wilcoxon signed-rank test was run. This test was used to investigate if there was a difference in participants' interest scores for individual topics before and after the VE.

In order to answer research question 3, we checked for trends in the data by using the aggregated scores of each category as dependent variables and the data regarding gender, prior VE experience, age, and self-perceived English levels as independent variables in a General Linear Model. Effect size was reported as partial eta-squared and interpreted according to Plonsky and Oswald's guidance (2014) (i.e., small ( $d = .40$ ;  $r_s = .25$ ), medium ( $d = .70$ ;  $r_s = .40$ ), large ( $d = 1.00$ ;  $r_s = .60$ )).

## Results

### Research Question 1

The descriptive statistics of the 39 surveyed items regarding students' perceived improvement in their linguistic and intercultural competence are presented in Table 4 (see the Appendix for the full set of items). In general, quantitative findings suggested that students perceived themselves developing all the five constructs studied with their attitudes developed the most ( $M = 3.91$ ;  $SD = .737$ ) and ability to use English language improved the least ( $M = 3.74$ ;  $SD = .905$ ).

**Table 4: Students' perceived improvements in their ability to use foreign language, attitudes, awareness, skills and knowledge regarding their own and partners' cultures after the VE programme.** (Summary only. See the Appendix for the full table).

	Min	Max	<i>M</i>	<i>SD</i>
Ability to use foreign language (L1-L11)	1	5	3.74	.905
Attitudes (A1-A7)	2	5	3.91	.737
Awareness (Aware1-Aware7)	2	5	3.83	.781
Skills (S1-S10)	2	5	3.79	.728
Knowledge (K1, K2, K3, K6)	2	5	3.87	.614

The lowest mean was recorded for the item L5 – *I have improved my grammatical accuracy* ( $M = 3.35$ ;  $SD = 1.158$ ). The development of students' ability to understand foreign language speakers (item L2) was rated the highest ( $M = 4.10$ ;  $SD = .472$ ), followed by their willingness to communicate with their international exchange partners (item A1) and their willingness to reflect on the impact and consequences of their decisions, choices and behaviour on their partners (item A7).

As for the qualitative data regarding their perceived improvement in language skills, most student participants believed that the virtual exchange program positively influenced their language skills. Many reported improvements in their speaking fluency, listening comprehension, writing skills, vocabulary expansion, and confidence enhancement (Table 5).

**Table 5: Themes of students' perceived benefits of VE on their language learning.**

Themes	Examples of students' responses
Speaking fluency	My <b>speaking</b> skills have <b>significantly improved</b> [thanks to] those amazing Saturday chats. I have become <b>more fluent</b> ...
Listening comprehension	At first, my listening skills [were] really bad, but... now I can <b>understand</b> about <b>70%</b> of what foreigners say.
Writing skills	This project had so many useful activities such as ... writing on Padlet, ... that helped <b>enhance</b> my ... <b>writing skills</b> ...
Vocabulary expansion	I learned <b>more words</b> ... that can be used in daily conversations.
Confidence enhancement	I <b>used to be afraid and nervous</b> to speak a foreign language in front of people, especially foreign people because I [was] afraid that I would make mistakes. Thanks to this project, I got more chances to speak and is <b>more confident</b> in speaking English.

The participants attributed their progress to factors such as their pre-meeting preparation and regular interaction with individuals from diverse cultural backgrounds. While the overall impact of the VE on their language learning was positive, two participants expressed uncertainty or felt their language skills had not improved.

When it comes to IC, many students noticed that the VE programme had positive impacts on their attitudes towards exploring other cultures and their appreciation for the diversity of different countries. It was instrumental in fostering cross-cultural understanding and effective communication with individuals from different countries. The thematic analysis of the qualitative data uncovered themes pertaining to students’ perceptions of the benefits of VE on their attitudes, knowledge, skills, and awareness (Table 6).

**Table 6: Themes of students’ perceived benefits of VE on their attitudes, knowledge, skills, and awareness.**

Constructs	Themes	Examples of students’ responses
Attitudes	Curiosity and openness	I <b>want to know more</b> about <b>the world, different nations, and their cultures.</b>
	Readiness to suspend disbelief about other cultures	<b>Some stereotypes</b> about these countries <b>changed.</b>
Knowledge	Knowledge of others	...I met a lot of people from different countries, and I gained <b>a lot of inside knowledge.</b> I learned a lot of <b>interesting facts</b> about <b>...other countries...</b> I have learned a lot about <b>taboos...</b> in the [other] countries...
	Knowledge of self	I learned <b>some knowledge</b> about <b>my culture</b> that I <b>had not known before.</b>
	Knowledge of ways of learning the language	I used to think that the best way to learn a language is using an app. But now I think <b>practicing speaking it</b> is the best.
Skills	Abilities to interact	I learned how to <b>engage</b> everyone in conversation and <b>encourage them to share more about themselves.</b>
Awareness	Awareness of differences	...this project [gave] me plenty of opportunities to learn about cultures all over the world and <b>open my horizon.</b>
	Awareness of similarities	I have realised that there are <b>a lot of things in common</b> between my country and others in the world.
	Awareness of importance of understanding self	I feel I <b>did not know much about my culture,</b> and I <b>need to study more and know more about ourselves</b> before we can introduce ourselves to others.

However, two student participants emphasised that more practice was needed to help them improve their abilities to communicate. Another highlighted that it was not the VE that changed his/her attitudes toward English learning and his/her curiosity about other cultures, but s/he always wanted to learn English and about other cultures.

### Research question 2

On the initial survey, students expressed their interest in a 5-point Likert scale (from 1 – not interested to 5 – very interested) in some suggested topics and seven topics which were voted the most were chosen to be discussed during the VE. They were also asked to add any other topics that they would like to talk about and most of them confirmed that the suggested topics were sufficient. However, if the programme were extended, some would love to talk about human rights ( $N = 2$ ); science and technology ( $N = 2$ ); sustainable development goals ( $N = 2$ ); religion ( $N = 2$ ); politics ( $N = 3$ ) and the environment ( $N = 6$ ).

With the majority of student participants’ English level being intermediate or lower, they could hardly “participate fully in topics of deeper meaning and pushing them to do so can result in

miscommunication and possibly develop resentment toward their partner because of this” (Hagley, 2016, p. 227). Therefore, further VE for higher-level students could include the topics as listed above. For the studied VE programme, besides the first week students getting to know each other, and the last week reflecting on the whole programme, the other six weeks covered the topics of (1) Daily life, (2) Hobbies, leisure, and entertainment; (3) Travel and holidays; (4) Food; (5) Family and friends; (6) Job/Work/Study based on the students’ preferences indicated in their pre-survey responses. After the programme, the post-survey asked the participants to rate their enjoyment when discussing these topics using a 5-point Likert scale (from 1 – not enjoyable to 5 – very enjoyable) to see if the participation in the VE programme had increased students’ interest in these topics.

Table 7 below shows the results of the Wilcoxon test of participants’ interest scores of each topic before and after the VCT programme. The findings indicated that there was a statistically significant difference between students’ interest in four out of seven topics before and after the VCT. The results recorded for the topics of Get to Know each Other, Family and Job/work/ suggested that the effect sizes were small. Despite the insignificance in the statistical differences of the students’ interest in the other three topics before and after the VE programme, the number of positive differences was still higher than that of negative differences or ties. Therefore, the VCT programme appeared to have had an impact on their increased interest.

**Table 7: Wilcoxon sign rank test summary of students’ interest in the discussion topics**

Topic	Positive differences	Negative differences	Number of ties	Test statistic	Standard error	Z	p	r
Get to know each other	22	13	13	443.5	59.082	2.175	<b>.030</b>	.314
Daily life	24	16	8	465.5	72.771	.763	.446	.110
Hobbies, leisure & entertainment	20	15	13	317.5	59.906	.042	.967	.006
Travel and holidays	19	17	12	335.0	61.786	.032	.974	.005
Food	21	11	16	380.5	52.405	2.223	<b>.026</b>	.321
Family and friends	23	13	12	478.0	62.322	2.327	<b>.020</b>	.336
Job/work/study	22	11	15	394.5	54.680	2.085	<b>.037</b>	.301

In the students’ reflective videos, most of them viewed the session on Food as their favourite. Though Food seemed to be among the most interesting topics to the students, it was the one receiving the lowest number of responses, interactions and comments on various platforms used for asynchronous activities. Therefore, more research might be needed to find out what can be done to improve students’ overall engagement. The number of responses, interactions, and comments on Padlet, which was employed for students to brainstorm their ideas and get prepared for the online meeting, remained quite high throughout the project (from 150 to 246 in total). This indicated that students were emotionally and behaviourally engaged in the topics and pre-meeting tasks. Their improved interest also underlines the importance of listening to and considering students’ voice and choice when designing VE programmes.

### Research question 3

The results from the General Linear Model (see Table 8 for the complete results) showed that the difference in age, language levels and previous VE experience as individual factors did not lead to the overall significant statistical differences in the five domains of abilities to use the language, attitudes, awareness, skills, and knowledge. However, there were statistically significant differences in linguistic development after the VCT programme between males and females with a medium effect size. It is noteworthy that the number of females far exceeded

that of males in this present study. Therefore, we would like to urge readers to apply caution in interpreting these findings.

Moreover, the interaction between gender and previous VE experience and the interaction between age and English level also significantly affected the participants' abilities to use the language and construct intercultural skills, respectively. These values indicated that the effect sizes were close to large and the relationships between these variables were moderate.

**Table 8: GLM test summary of the effects of background factors and their interactions on IC and linguistic competence**

	Type III Sum	df	Mean	F	p	Partial Eta	d	r
<i>Effects of the background factors and their interactions on the development of language</i>								
<b>Gender</b>	<b>1.674</b>	<b>1</b>	<b>1.674</b>	<b>5.047</b>	<b>.033</b>	<b>.153</b>	<b>.850</b>	<b>.391</b>
Age	1.288	4	.322	.971	.439	.122	.733	.349
English level	.560	3	.187	.563	.644	.057	.488	.239
Previous VE experience	.806	1	.806	2.431	.130	.080	.584	.283
Gender * Age	.863	1	.863	2.603	.118	.085	.610	.292
Gender * English level	2.019	2	1.009	3.044	.064	.179	.934	.423
<b>Gender * Previous VE experience</b>	<b>2.026</b>	<b>1</b>	<b>2.026</b>	<b>6.109</b>	<b>.020</b>	<b>.179</b>	<b>.934</b>	<b>.423</b>
Age * English level	.007	1	.007	.020	.887	.001	.063	.032
Age * Previous VE experience	.167	2	.083	.251	.780	.018	.271	.134
English level * Previous VE experience	.377	2	.188	.568	.573	.039	.403	.197
<i>Effects of the background factors and their interactions on the development of attitude</i>								
Gender	.072	1	.072	.253	.619	.009	.191	.095
Age	1.240	4	.310	1.089	.381	.135	.788	.367
English level	.538	3	.179	.630	.602	.063	.517	.251
Previous VE experience	.314	1	.314	1.105	.302	.038	.398	.195
Gender * Age	.002	1	.002	.008	.931	.000	.000	.000
Gender * English level	.109	2	.054	.191	.827	.013	.230	.114
Gender * Previous VE experience	.543	1	.543	1.908	.178	.064	.523	.253
Age * English level	.017	1	.017	.059	.810	.002	.090	.045
Age * Previous VE experience	.002	2	.001	.003	.997	.000	.000	.000
English level * Previous VE experience	.320	2	.160	.562	.577	.039	.403	.197
<i>Effects of the background factors and their interactions on the development of awareness</i>								
Gender	.076	1	.076	.235	.632	.008	.179	.089
Age	.331	4	.083	.255	.904	.035	.379	.187
English level	1.673	3	.558	1.714	.187	.155	.864	.394
Previous VE experience	.128	1	.128	.393	.536	.014	.237	.118
Gender * Age	.077	1	.077	.238	.630	.008	.180	.089
Gender * English level	.121	2	.061	.186	.831	.013	.230	.114
Gender * Previous VE experience	.180	1	.180	.552	.464	.019	.278	.138
Age * English level	.186	1	.186	.570	.456	.020	.286	.141
Age * Previous VE experience	.407	2	.203	.625	.543	.043	.424	.207
English level * Previous VE experience	1.316	2	.658	2.022	.151	.126	.759	.355
<i>Effects of the background factors and their interactions on the development of skills</i>								
Gender	.069	1	.069	.478	.495	.017	.263	.130
Age	.452	4	.113	.782	.546	.101	.662	.318
English level	.468	3	.156	1.081	.373	.104	.672	.322
Previous VE experience	.015	1	.015	.100	.754	.004	.126	.063
Gender * Age	.000	1	.000	.000	1.000	.000	.000	.000
Gender * English level	.005	2	.002	.017	.983	.001	.063	.032
Gender * Previous VE experience	.234	1	.234	1.620	.214	.055	.482	.235
<b>Age * English level</b>	<b>.931</b>	<b>1</b>	<b>.931</b>	<b>6.442</b>	<b>.017</b>	<b>.187</b>	<b>.959</b>	<b>.432</b>
Age * Previous VE experience	.009	2	.004	.031	.970	.002	.090	.045
English level * Previous VE experience	.190	2	.095	.657	.526	.045	.434	.212
<i>Effects of the background factors and their interactions on the development of knowledge</i>								
Gender	.369	1	.369	1.398	.247	.048	.449	.219
Age	.315	4	.079	.298	.877	.041	.409	.203
English level	.772	3	.257	.975	.418	.095	.641	.308
Previous VE experience	.003	1	.003	.013	.911	.000	.000	.000
Gender * Age	.026	1	.026	.100	.755	.004	.127	.063
Gender * English level	.109	2	.054	.206	.815	.014	.238	.118
Gender * Previous VE experience	.029	1	.029	.111	.741	.004	.127	.063
Age * English level	.142	1	.142	.538	.469	.019	.278	.138
Age * Previous VE experience	.158	2	.079	.300	.743	.021	.293	.145
English level * Previous VE experience	.257	2	.128	.487	.620	.034	.375	.184

## Discussion, limitations, and future research

Based on the findings above, it might be concluded that the transnational VE programme was useful for developing different dimensions of language skills and IC. This is in line with the results of many studies in the VE literature (Dooly & O’Dowd, 2018; Dooly & Vinagre, 2022; Hagley, 2020a ; O’Dowd & Lewis, 2016; Schenker, 2012a, b; Ware & O’Dowd, 2008; Uzum et al., 2020). One reason for this might be because learners are challenged to find ways to make themselves comprehensible to those who do not share the same linguistic and cultural backgrounds and to understand these interlocutors when being involved in telecollaboration (Pitts & Brooks, 2017). Learners’ abilities to communicate and adapt interculturally can be enhanced through such problem solving (Çiftçi & Savaş, 2018).

The general linguistic development, however, was rated the lowest in this current study. This VE programme, like many others, was implemented over a relatively short period (i.e., 8 weeks) while “language competence development is complex and discontinuous and takes place over long periods of time” (Ellis, 2015, p. 297). It might not be easy to overcome this shortcoming because of the limited resources to undertake longitudinal studies and the annual change in students involved (Dooly & Vinagre, 2022). Moreover, “assess[ing] and verify[ing] precise learning gains” is another challenge that is difficult to respond to (Dooly & Vinagre, 2022, p. 396). This research relied solely on self-reported data by students and the lack of the assessment of linguistic skills carried out by the teacher is one of its limitations (see Babaii et al., 2016 for a discussion around speaking self-assessment). Further research might consider looking more into measurable gains like interpretive listening and interpersonal speaking skills (Kato et al., 2016) or oral fluency (Spring et al., 2019). The lack of a comparison group which was not involved in a VE was another limitation of this study. Future research might need to use a variety of evaluation types that align with the types of linguistic skills developed through VE tasks (Dooly & Vinagre, 2022) and include one comparison group to help validate the impacts of VE using ELF on students’ language skills and IC (Schenker, 2012a).

Students with advanced levels of English are likely to benefit a great deal from VE (O’Dowd & Lewis, 2016). Spring et al. (2019) propose that more advanced learners would likely show greater improvement in their oral fluency when paired with native speaker partners in the VE since those with lower skill levels tend to encounter more problems with unknown structures or vocabulary and therefore are more likely to struggle with maintaining conversations. In addition, Wang and Devitt’s systematic review (2022) suggests that the inadequate language proficiency might increase anxiety levels and frustrations among learners, which could “inhibit the successful implementation” of the VE (p. 20). This drawback (i.e., increased level of anxiety and frustration), which might be witnessed in interactions between less advanced language learners and native speaker VE partners (Spring et al., 2019), could possibly be transcended in VE using ELF. Moreover, Hagley (2020a) notes that by participating in simple VE discussing topics that are “non-threatening [and] simple in linguistic level” (p. 76), beginner or pre-intermediate English learners can “increase their interactional confidence, intercultural sensitivity, knowledge of their own culture, gain motivation to learn English, and are more interested in other cultures” (p. 85). The descriptive statistics and qualitative results of this study involving English learners of different levels (i.e., from A2 to C1) also showed that students believed that VE helped them develop their ability to use English, attitudes, awareness, knowledge, and skills required for intercultural encounters. Furthermore, many participants emphasised that they became more confident to use English and less afraid of



making mistakes after the VE, which is consistent with Çiftçi and Savaş's synthesis (2018). Moreover, there were no statistically significant differences recorded among learners of different English levels. Therefore, it can be said that VE might be beneficial for learners of all levels of English with topics and types of interactions or activities suitable for each level taken into consideration.

However, it is worth noting that the interaction between age and English level resulted in statistically significant differences in the participants' improved intercultural skills and abilities to use the language. Although this had not been reported in any previous studies, several studies have shown the influences of either age or English level on IC. To illustrate, Huang (2021) found that there was a significant correlation between English proficiency and international experience and ICC acquisition. In terms of age, some showed that greater improvement in IC were made by older participants (Kobayashi, 2009; Steuernagel, 2014). Another interaction leading to the significance in the statistical differences was between gender and VE experience, which influenced students' abilities to use the language. Gender was also the only background factor that caused the overall statistically significant differences in one of the five studied domains, which was linguistic development. These findings were in line with many studies proving the impacts of gender on language learning (e.g., Gass & Varonis, 1986; Montero-SaizAja, 2021; Pica et al., 1989; van der Sliket al., 2015;). Nevertheless, further research is needed to ascertain how these interactions influence the development of IC and linguistic competence.

This study demonstrated that participating in multi-national VE settings could foster participants' awareness about not only the differences but also the similarities between cultures. Students improved their knowledge of both their own and other cultures and became increasingly aware of the importance of understanding their own cultures. This corroborates with Nguyen, D.N. et al. (2020) and Hagley's findings (2020a) stating that only after understanding one's own culture can one appreciate other cultures.

## **Conclusion**

In the context where geographic mobility that enables intercultural exchange and communication is almost taken for granted, learners from less well-resourced contexts can be at risk of being left behind. The lack of access to valuable opportunities which allow them to take an active part in the increasingly globalised world may in turn create a vicious circle which put them at a further disadvantage. Since physical mobility for face-to-face intercultural interactions with people from different backgrounds and geographical locations is not always possible for every (language) learner, we wanted to investigate whether learners may be able to benefit from another form of exchange enabled by technological means, namely Virtual Exchange. It is against this backdrop that we conducted our study to explore the possible benefits of VE on the development of IC and language skills among learners, including those who are based in countries with less advanced economies.

Our findings indicated that students believed that they have developed in a variety of ways in the constructs of abilities to use the language, attitudes, awareness, skills, and knowledge, which are outlined as the components of IC (Fantini, 2000). These findings helped reinforce that the benefits which are often associated with exchanges involving temporary physical relocation such as study abroad or short immersion can also be (partially) achieved through VE. However, it is crucial for VE practitioners to consider different factors, some of which

are students' English proficiency and voices and choices (e.g., what topics students want to discuss) when planning VE programmes to help ensure students' engagement throughout these online intercultural projects.

The statistical analysis did reveal significant effects of gender and the interaction between gender and previous VE experience on students' self-evaluated development of language use, and significant effects of the interaction between age and English level on their self-evaluated development of intercultural skills. Moreover, the majority of the students perceived themselves to have improved on all the five studied aspects of language use and IC, which was confirmed by the qualitative comments we gathered and analysed through the theoretical underpinning and frameworks by Fantini (2000) and Byram (1997).

Despite some limitations regarding research design and data collection tools, this present study shed light on the impacts of a multi-national VE using ELF involving students from both Global North and Global South countries and of different levels of English (i.e., from A2 to C1). It is encouraging to learn that VE programmes such as this 8-week multinational VCT can indeed be a cost-effective and useful alternative tool for those based in less well-resourced societies in the Global South. Moreover, it is worth mentioning that a group of student participants of the VCT project decided to continue to work together to maintain the programme for other students after partaking in our programme. This, we believe, demonstrates how conducive VE can be in preparing students for the skills needed to be able to work with people from different backgrounds. To conclude, we join others (Çiftçi & Savaş, 2018; Godwin-Jones, 2019; Hilliker, 2020) in calling for EFL teachers to employ VE to allow students of different ages and English levels, especially those who cannot travel because of their personal, financial or emergency circumstances or when there are travel restrictions, to have opportunities to be exposed to cross-cultural experiences and to be able to improve their IC.

## Acknowledgements

We would like to express our sincere thanks to our participants for taking part in our project. We would also like to thank the editorial team of *TESL-EJ*, especially the co-editor, Associate Professor Ryan Spring, and the anonymous reviewers for their valuable input in the process. Their feedback and suggestions have helped us improve the clarity of our work.

## Note

[1] Global South is not really about the geographical location of the country but, broadly speaking, "a metaphor for underdevelopment," but see Dados and Connell (2012) and Mahler (2017) for discussions.

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## To Cite this Article

Nguyen, N. D-N., Leung, A. H-C., Hien, H-T., & Thiet, N-T. (2024). The impact of virtual exchanges using English as a lingua franca on students' linguistic and intercultural competence. *Teaching English as a Second Language Electronic Journal (TESL-EJ)*, 28(3). <https://doi.org/10.55593/ej.28111a1>

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## Appendix

**Table 4: Students' perceived improvements in their ability to use foreign language, attitudes, awareness, skills and knowledge regarding their own and partners' cultures after the VE programme.**

	Min	Max	<i>M</i>	<i>SD</i>
<b>Ability to use foreign language</b>	<b>1</b>	<b>5</b>	<b>3.74</b>	<b>.905</b>
L1 - I have improved my ability to interact with foreign language speakers.	2	5	3.94	.755
L2 - I have improved my ability to understand foreign language speakers.	2	5	4.10	.472
L3 - I have improved my range of vocabulary.	2	5	3.73	.962
L4 - I have improved my confidence in using the foreign language.	2	5	3.73	.962
L5 - I have improved my grammatical accuracy.	2	5	3.35	1.158
L6 - I have improved my fluency in speaking.	2	5	3.81	.891
L7 - I have improved my accuracy of pronunciation.	2	5	3.69	.993
L8 - I have improved my speaking skills.	2	5	3.98	.699
L9 - I have improved my writing skills.	2	5	3.48	1.111
L10 - I have improved my reading skills.	2	5	3.44	1.128
L11 - I have improved my listening skills.	1	5	3.92	.821
<b>Attitudes</b>	<b>2</b>	<b>5</b>	<b>3.91</b>	<b>.737</b>
A1 - I have become more willing to communicate with my exchange partners from other countries.	2	5	4.06	.561
A2 - I have become more willing to learn language and culture from my exchange partners.	2	5	3.92	.739
A3 - I have become more willing to try to communicate in English with my exchange partners and behave in ways judged "appropriate" by their cultures.	2	5	3.88	.789
A4 - I have become more willing to try to deal with the emotions and frustrations caused by my participation in the virtual exchange.	2	5	3.79	.874
A5 - I have become more willing to show interest in particular aspects of other cultures.	2	5	3.87	.789

A6 - I have become more willing to adapt my behaviour in accordance to what I am learning about communication in other cultures.	2	5	3.88	.789
A7 - I have become more willing to reflect on the impact and consequences of my decisions, choices, and behaviour on my international exchange partners.	2	5	4.00	.619
<b>Awareness</b>	<b>2</b>	<b>5</b>	<b>3.83</b>	<b>.781</b>
Aware 1 - I have become more aware of differences across languages and cultures.	2	5	3.92	.739
Aware 2 - I have become more aware of my reactions to these differences.	2	5	3.81	.816
Aware 3 - I have become more aware of how a specific context impacts my interaction with others.	2	5	3.85	.772
Aware 4 - I have become more aware of how my exchange partners see me.	2	5	3.79	.798
Aware 5 - I have become more aware of how I am viewed by members of my own culture.	2	5	3.83	.753
Aware 6 - I have become more aware of differences (i.e., diversity aspects such as race, class, gender, age, ability, sexual orientation, etc.) within my own culture.	2	5	3.75	.838
Aware 7 - I have become more aware of differences (i.e., diversity aspects such as race, class, gender, age, ability, sexual orientation, etc.) within other cultures.	2	5	3.83	.753
<b>Skills</b>	<b>2</b>	<b>5</b>	<b>3.79</b>	<b>.728</b>
S1 - I am flexible when interacting with my international exchange partners.	2	5	3.85	.684
S2 - I know how not to offend my international exchange partner with my (verbal) behaviour.	2	5	3.96	.582
S3 - I am able to contrast other cultures with my own.	2	5	3.85	.684
S4 - I use strategies which aid my communication and reduce misunderstandings when communicating with my exchange partners.	2	5	3.75	.758
S5 - I develop strategies for learning the English language and about different cultures.	2	5	3.81	.734
S6 - I use a variety of effective strategies when interacting with culturally different people.	2	5	3.83	.663
S7 - I interact appropriately in written exchange with my exchange partners. I use appropriate strategies to enhance my	2	5	3.90	.660

learning about different cultures and language in the virtual exchange.				
S8 - I can name sociopolitical factors which have shaped both my own and partners' culture.	2	5	3.52	.922
S9 - I employ appropriate strategies for adjusting to intercultural exchange.	2	5	3.69	.854
S10 - I use appropriate strategies to enhance my learning about different cultures and language in the virtual exchange.	2	5	3.73	.736
<b>Knowledge</b>	<b>2</b>	<b>5</b>	<b>3.87</b>	<b>.614</b>
K1 - I use appropriate strategies to enhance my learning about different cultures and language in the virtual exchange.	2	5	3.94	.598
K2 - I can contrast aspects of English language and different cultures with my own.	2	5	3.85	.684
K3 - I know the essential norms and taboos (greetings, dress, behavior, etc.) of my partners' culture.	2	5	3.88	.640
K6 - I can describe and explain my own behavior and that of my exchange partners in various domains (e.g., social interaction, time orientation, relation to the environment, spiritual, etc.).	2	4	3.81	.532

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