

Becoming Globally Competent Through Virtual Exchange

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Abstract. Education's progress on the stage of internationalization attracts the public's eye and a certain type of global competence, which has gradually become an important goal of high-education. Online platforms make it possible for VE. This gives students a place for engaging in intercultural activities with peer-students with different background and to set the foundation for building global competence. Existing studies show that VE is beneficial to the improvement of global competence, but there are still some gaps in the selection of participants and the design of the method. Hence, this study investigates the effect of VE towards cross-cultural understanding via examining three fundamental elements of Global Competence, comprising of knowledge, skills and attitude. It is good for both theorizing and teaching. It is also useful in helping build the image of just how closely the two are connected and can provide some insight in helping plan and improve VE programs.

Keywords: global competence, digital exchange, collaborative online international learning (COIL), e-tandem, telecollaboration

1. Introduction

The importance of global competence has become increasingly prominent, emerging as a key focus in the field of education [1,2]. Indeed, the *Council on International Educational Exchange (CIEE)* proposed global competence and emphasised its importance in 1988. As a multidimensional concept called 'global competence' which includes three key elements: 1. knowledge; 2. cultural perception; 3. intercultural communication; These skills which closely relate to interacting in a globally interdependent world [3]. Hunter proposed that global competence comprises four key elements: first is knowledge, then is skills, followed by attitudes, and experiences as last [4]. Additionally, the Global Competence Framework defined by PISA 2018 describes global competence as the significant capability to analyse national and challenge globally, and to comprehend different perspectives and worldviews positive cross culture communication, and actions that contribute to human welfare [5].

VE plays an increasingly crucial role in developing global competence compared to traditional offline international student exchange programmes, thanks to the accessibility provided by the internet and digital tools. With greater inclusiveness and lower costs, VE provides more opportunities for students from diverse linguacultural backgrounds to interact and collaborate online under the guidance of experts, even in their formal curriculum [6,7]. VE adopts different approaches across various fields [7]. For example, in foreign language learning, two main models are telecollaboration and E-tandem [7]; in business studies, X-culture is typical [6], while in an

inter-disciplinary context, collaborative online international learning (COIL), over the past few years, it has been growing in popularity.

Previous research have tended to investigate the general role of VE in global competence as a whole; however, only a few studies have detailed the effects of VE programmes on different dimensions of global competence. Priority has been given to improving linguistic, digital and teamwork competence [8], critical thinking [9] as well as language application skills in “real-life” situations [10] - all of which are components of global competence. Regarding the development of global competence knowledge, some studies have focused on cultural knowledge and perspectives on global social justice issues [10]. Moreover, virtual exchange can foster empathy [11] and cultural understanding [12]. However, while most of the relevant studies have been empirically based [13], [14], a systematic review of the relationship between VE and global competence is still needed.

This paper will review existing research on global competence, virtual exchange and how virtual exchange influences various dimensions of global competence. As such, it can help refine VE designs among practitioners, providing suggestions for educators and policymakers, as well as being a reference for future research and further development of this field.

2. Global competence

Several scholars and organisations have explored the definition of global competence. Hunter divided global competence into three factors as part of the Pyramid Model of Global Competence, focusing more on individual ability and personal adaptability in an integrated world. This entails embracing different cultures and collaborating with people from diverse international backgrounds [4]. A later study by Reimers emphasised the ethical dimension, particularly elements such as equality, human rights and interdisciplinary knowledge [15]. Besides individual researchers, some international organisations also contribute to the development of this concept. One typical example is the *Organisation for Economic Cooperation and Development* (OECD). The OECD defined global competence as the ability to examine national, international and intercultural topics and issues, the appreciation of diverse perspectives, and engagement in the contribution of human well-being [16]. While, as for another organisation, the *Asia Society*, it emphasised the importance of diverse perspectives and worldwide views as well as the collective actions [17].

Considering the close connection among global competence and other related terms, it is vital to distinguish their connotations. Intercultural competence shares similar meanings with global competence. According to Deardorff's Pyramid Model, it is a multifaceted concept that allows individuals to engage in various cultural contexts [18]. As a subset of global competence, intercultural competence focuses on the understanding of diverse cultures, whereas global competence extends its scope to encompass global issues and collective well-being. Besides, it is also worthwhile to distinguish global competence from intercultural communicative competence (ICC). ICC limited its scope to communicative style and language proficiency. As Byram mentioned, the core of ICC lies in enabling students to express themselves effectively, while developing intercultural awareness and understanding [19]. In other words, ICC serves as a fundamental component of global competence. Overall, as a vital response to internationalisation and cultural diversity, global competence empowers individuals to adapt to a more connected world. In this regard, VE plays a key role in this process by providing students with an online platform to build global competence.

3. Virtual exchange

VE is a teaching and learning approach incorporating dynamic online cross-cultural interaction and collaboration between learners and partners from other cultures or countries with scaffolding from

educators [6,20]. In some studies, specific approaches to VE, such as telecollaboration and COIL, are often used interchangeably with VE. In addition, VE is also highly associated with many related terms, such as virtual mobility, global networked learning, online intercultural exchange, and online collaborative learning. By virtue of online tools, communication in VE can be synchronous, asynchronous, or a combination of both. Skype and Zoom are common synchronous communication platforms that make real-time communication easier, helping to improve interactivity and providing instant feedback. However, there are some challenges to synchronous communication. The first is that participants in different time zones may have difficulty coordinating suitable meeting times [21]. Additionally, there is a high requirement for digital literacy, which may be challenging for users experiencing poor network conditions and limited access. But instead asynchronous communications can be done through documents, blogs, forums, which are much easier to use and allows the participants to respond when they want [22]. But it is also not very effective in communication efficiency and there will be no immediate feedback, which will affect the cooperation of the team.

VE plays an important role in nurturing the world citizens. Firstly, it helps the student directly communicate with a native speaker, which greatly improves their language skills and knowledge of the culture. This echoes the findings of Aristizábal and Welch that VE is a means by which students can grow their cultural knowledge and increase their understanding of one another's backgrounds[13]. By removing old conceptions, stereotypes, biases, we can provide participants with an overall view of the global stage to get a complete picture of the world. Secondly, VE's role in skills. In addition to students' improving their language skills, they also gain the practical skills for applying these linguistic skills in real life [10]. Moreover, online intercultural exchanges enable students to hone both their intercultural communication skills and their critical thinking skills via VE.

Beyond the improvement of knowledge and skills, there is obvious attitudinal progress that students become more open and accepting of other cultures [14]. VE allows participants to learn about the cultural differences and as a result, their intercultural dispositions are formed. One example would be the connection between VE and SDGs as shown by Szobonya & Roche [23], showing that VE is good for the open-mindedness of students and makes them more proactive and responsible.

However, the limitations of VE cannot be ignored. Compared to face-to-face interaction, VE may not be able to form true interpersonal connections between participants. And at the same time, it makes the communication shallower, so that the students are unable to make a profound reflection on it.

4. Gaps in this research strand

Although numerous studies have shed light on the effectiveness of VE in developing global competence, there are still some research vacancies. In most cases, studies on VE have been short-term, spanning one semester and typically ranging from one to three months. For instance, Kayumova and Sadykova [24] designed a six-week COIL project, while Hagley's [25] Higgins's [12] VE programs extended over eight weeks. In contrast, only a few VE projects have lasted longer, such as the VE studied by Duffy et al. [26], which lasted eight months. Moreover, there is still a lack of longitudinal studies to track development in participants' global competence over time. As for researches involved the extended effects of VE after completion are even more limited. Apart from that, VE projects mainly focus on communication between a non-English-speaking country and a native English-speaking one. Salomao and da Silva's [27] study is a classic example that involved participants from the United States and Brazil. Likewise, Duffy and partners [26] investigated a VE programme linking undergraduates in the United States and Thailand.

In addition, VE research in the Global South, especially in underdeveloped countries, remains rare, hindering a comprehensive understanding of VE's impact in different economic and cultural

contexts. Furthermore, compared to literature reviews, current research primarily focuses on empirical studies, particularly observational research. However, experimental studies, especially those using experimental and control group designs, remain relatively rare, making causal inferences challenging. Furthermore, quantitative research is limited, with most studies favouring mixed methods, such as those by Marull and Kumar [10] and Machwate et al. [14], and qualitative approaches, such as those used.

5. Conclusions

The essay reviews the research on VE's relationship to global competence. It highlights that VE positively affects students' knowledge acquisition, skill development, and attitudes. Also, the findings have implications for theory and practice. Theoretically, this essay explains the term of Global competence, differentiate with other terms, as well as different VE methods and tools. Practically speaking it can help give the student direction on how to perform a VE and improve the Global Outcomes of the game and also give some insight to the teacher on how to improve their VE program. Furthermore, for educational institutions, the essay benefits by adding and advocating VE to be included within the official curriculum throughout the world.

6. Future research direction

Based on the current results, it is recommended that subsequent studies extend the period of VE. Conducting longitudinal follow-ups and designing multi-round VE are both reasonable to measure the long term effect of VE on students' global competence. And also, give more priority to the experimental research. Adopting experimental and control group designs will enhance the causal inference and give a strong hard core evidence for the study. Lastly, after the inclusion of more varied cultural and economic contexts, future studies may look into how to better propagate VE throughout the world, especially in the Global South and in less developed parts of the world.

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