

7. Impact of Virtual Exchange on teachers' and student teachers' intercultural competence

Introduction

This chapter explores participants' development of intercultural competence (Byram, 1997, 2020) as a result of their participation in the Virtual Exchanges (VEs) implemented as part of the VALIANT project. In recent years, several related models and frameworks that complement each other have emerged, such as the global competence models (UNESCO, 2014; OECD, 2018), the model of competences for democratic culture (Council of Europe, 2016) or frameworks for intercultural citizenship (Deadorff, 2006; Risager, 2007; Byram, 2008). In short, all these models of intercultural or global competence or citizenship, although presenting differentiating nuances, focus on the development of knowledge, skills, attitudes and values to communicate and act effectively and appropriately in different cultural contexts. The basic difference between the concepts of competence and citizenship can be found in the element of action taking of social action.

In contexts of intercultural communication using a foreign language, as was the case for the VALIANT participants, the development of what is known as intercultural communicative competence has become increasingly relevant in past 30 years. Publications such as "Context and Culture in Language Teaching" by Kramsch (1993) or "Teaching and Assessing Intercultural Communicative Competence" by Byram (1997) dealt with the relevance of preparing people to cope successfully with establishing and developing intercultural relations with people who have a different set of beliefs, world views and practices from their own while using a foreign language for communication. Byram (1997) deliberately built on Hyme's (1972) concept of communicative competence by adding the intercultural dimension. According to this model, the educational goal was to become

a successful ‘intercultural speaker’ and to move away from the unrealistic idea of the native speaker as a model (Chun, 2015; Lindner, 2016).

Numerous research studies over the past decades have explored and acknowledged the value of online intercultural interaction and collaboration during VE for the development of intercultural competence (Belz, 2003, 2004; Furstenberg et al., 2001; Müller-Hartmann, 2007; Ware, 2005; Furstenberg & Levet, 2014; Chun, 2015; see Avgousti, 2018 for an overview; Vinagre & Esteban, 2019). However, intercultural learning does not simply happen via engaging in intercultural communication and collaboration; rather, the learning experience needs to be intentionally and carefully designed (Richardson, 2016). The inclusion of collaborative tasks (Helm & Van der Velden, 2019) that challenge VE participants with the need to negotiate and collaborate to accomplish the task together is instrumental in terms of developing intercultural skills. Furthermore, the challenges that arise as a result of engaging in such tasks have been shown to contribute to improved intercultural learning outcomes. Despite this, collaborative tasks tend to be the least frequently included in VE projects (Guth & Helm, 2010), which is likely to be due to their complexity. Another aspect that has been acknowledged as key in contributing to intercultural learning in VE is the teachers’ role in offering pedagogical mentoring and support to students to reflect on and learn from their online intercultural interactions throughout the project (O’Dowd et al., 2020; Gutiérrez et al., 2021, 2022).

Given the context of the VEs implemented as part of the VALIANT project (i.e., engaging teachers and student teachers), it is worth noting the relevance that numerous studies have attributed to class-to-class VEs for initial teacher education (Dooly & Sadler, 2020; Wu, 2021). A strong argument for implementing such projects is based on the model of experiential learning (Vinagre, 2015; Grau & Turula, 2019). This approach suggests that if teachers participate as learners in such innovative educational experiences, they will find it easier and will be more likely to integrate VE into their own teaching in the future. In such contexts, teachers can develop their intercultural collaboration skills while learning innovative educational approaches and developing new international partnerships and educational initiatives. In this area, the EVALUATE project (Evaluating and Upscaling Telecollaborative Teacher Education), a large-scale study that was an Erasmus+ European Policy Experiment involving more than 1000 student teachers from 16 different countries, stands out. Initial

teacher education classes were paired and participated in VEs developed around tasks and content related among others to intercultural competence (The EVALUATE group, 2019). Another recent study engaging student teachers in VE to enhance their professional awareness can be found in Symeonidis and Impedovo (2023) where a VE project was designed and implemented with Austrian and French student teachers who were seen to develop appreciation of cultural diversity. At the same time, other recent studies (Nissen & Kurek, 2020; Stevens Initiative, 2020) have also found that VEs are key in providing teachers with learning experiences for professional development being intercultural competence one of the aspects to be developed.

Research Questions

The main objective of this chapter is to assess the effectiveness of VALIANT VEs on teachers' and student teachers' perceived gains in intercultural competence. Intercultural competence is seen as a core skill in the context of teachers' intercultural collaboration opportunities, ability to participate in online collaborative projects, and networks (i.e., eTwinning, Erasmus+ KA2 proposals). The main research questions for this investigation:

- RQ1. To what extent does engagement in VE contribute to teachers and student teachers perceived intercultural competences development?
- RQ2. What aspects of intercultural competence are perceived to be the most/least valued by the VE participants?

Teachers and student teachers completed identical surveys measuring perceived intercultural competence at the beginning of the VE (pre-VE survey) and at the end of the VE (post-VE survey).

To answer RQ1, the pre- and post-VE survey scores for each of the four intercultural skills were computed and the differences examined. To answer RQ2, the qualitative data from the open-ended questions in the pre- mid- and post-VE surveys were coded and analysed. Participants' answers to these questions allowed to identify the main themes emerging from the qualitative data set in terms of specific aspects of intercultural

competence development, thus supplementing the quantitative results. For a more detailed description of the surveys, data collection and analysis see Chap. 3 of this volume.

Main Quantitative Findings

Overall, the results showed that there was a significant perceived moderate increase in intercultural collaboration skills ($Md_{\text{pre-VE survey}} = 80$, $Md_{\text{post-VE survey}} = 85.4$, $z = -9.016$, $p < 0.001$, $r = -0.43$) and intercultural verbal and non-verbal behaviour ($Md_{\text{pre-VE survey}} = 75$, $Md_{\text{post-VE survey}} = 80$, $z = -0.31$). Furthermore, there was a small significant increase in intercultural perspective taking skills ($Md_{\text{pre-VE survey}} = 83.3$, $Md_{\text{post-VE survey}} = 86.8$, $z = -4.351$, $p < 0.001$, $r = -0.21$). There was no significant change in intercultural learning. Lack of perceived change in intercultural learning can be attributed to the initial high scores at the pre-VE survey ($Md_{\text{pre-VE survey}} = 95$) and as such, there was a ceiling effect which is common and was observed in other similar research projects e.g., EVOLVE (EVOLVE Project Team, 2020) EVALUATE (Baroni et al., 2019) and EVE (Hemp & van der Velden, 2021).

The results also showed that there was no change in any of the intercultural skills in the control group. Therefore, these results indicate that any perceived change reported by the participants is due to the VE experience and unlikely to happen by chance. Furthermore, the results were largely consistent across all three rounds of the exchanges highlighting the stability and replicability of the findings.

The pattern of the perceived gain in three intercultural skills was consistent in both teachers and student teachers. Teachers showed significant moderate improvement in intercultural collaboration ($Md_{\text{pre-VE survey}} = 85$, $Md_{\text{post-VE survey}} = 88$, $z = -3.922$, $p < 0.001$, $r = -0.29$) and behaviour ($Md_{\text{pre-VE survey}} = 80$, $Md_{\text{post-VE survey}} = 84.3$, $z = -0.29$), and small significant change in perspective taking ($Md_{\text{pre-VE survey}} = 86.7$, $Md_{\text{post-VE survey}} = 90$, $z = -2.043$, $p < 0.05$, $r = -0.15$). Student teachers showed similarly significant moderate improvement in the intercultural collaboration ($Md_{\text{pre-VE survey}} = 76.5$, $Md_{\text{post-VE survey}} = 83.3$, $z = -8.148$, $p < 0.001$, $r = -0.51$), followed

by only small change in intercultural behaviour ($Md_{pre-VE\ survey} = 70.3$, $Md_{post-VE\ survey} = 76.3$, $z = -5.216$, $p < 0.001$, $r = -0.33$) and small change in perspective taking ($Md_{pre-VE\ survey} = 81$, $Md_{post-VE\ survey} = 84$, $z = -3.830$, $p < 0.001$, $r = -0.24$). These results are summarised in Figure 7.1.

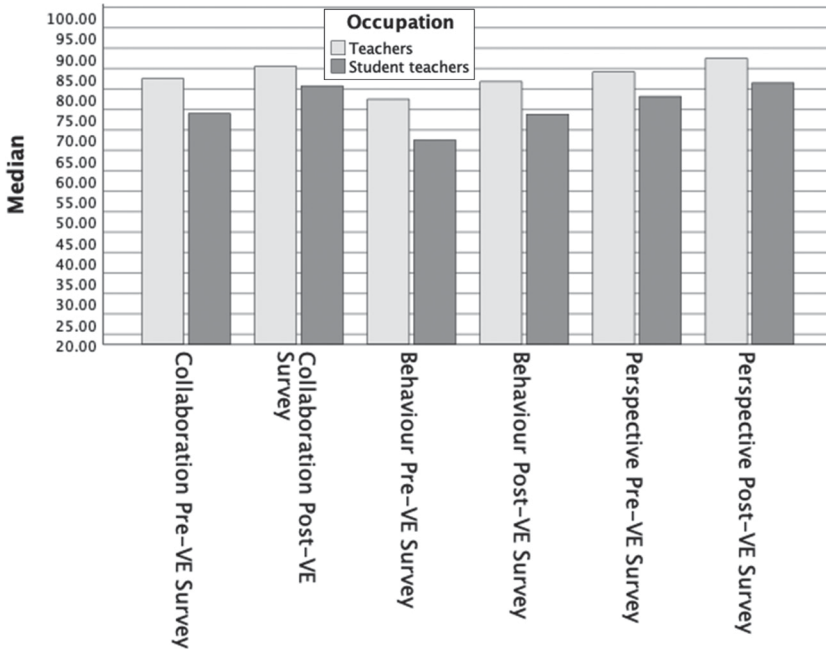


Figure 7.1: Development of intercultural skills for teachers and student teachers

VE type (teachers only, student teachers only, and mixed teachers with student teachers) had almost no effect on the development of the intercultural skills and was consistent and significant in all VE types. The results are summarised in Table 7.1 below. Moderate improvement across all the VE types was noted in intercultural collaboration. Intercultural behaviour was moderately improved in the VEs where teachers collaborated with other teachers or with student teachers. Perspective taking was moderately improved in the VEs where teachers collaborated with other teachers and less so (but still significantly) in other types of the VEs.

Table 7.1. Results of the Wilcoxon Signed Rank tests for the different VE types

| VE type | Statistics | Collaboration | Behaviour | Perspective |
|-----------------------------------|------------------------------|---------------|-----------|-------------|
| Teachers with Student teachers | Md _{Pre-VE survey} | 82.5 | 76.7 | 84.0 |
| | Md _{Post-VE survey} | 87.5 | 80.3 | 87.0 |
| | <i>z</i> | -6.458 | -4.617 | -2.897 |
| | <i>p</i> | <.001 | <.001 | <0.01 |
| | <i>r</i> | -0.4 | -0.28 | -0.18 |
| Student teachers only | Md _{Pre-VE survey} | 70.9 | 67.8 | 79.3 |
| | Md _{Post-VE survey} | 81.8 | 73.0 | 84.7 |
| | <i>z</i> | -5.538 | -3.239 | -2.386 |
| | <i>p</i> | <.001 | <0.001 | <0.01 |
| | <i>r</i> | -0.54 | -0.31 | -0.23 |
| Teachers only | Md _{Pre-VE survey} | 82.5 | 76.7 | 84.7 |
| | Md _{Post-VE survey} | 86.0 | 82.0 | 90.0 |
| | <i>z</i> | -2.939 | -3.379 | -2.478 |
| | <i>p</i> | <0.01 | <.001 | <0.05 |
| | <i>r</i> | -0.36 | -0.41 | -0.3 |

Note: Md – Median

Overall, the results of the quantitative analysis showed that VE can help teachers and student teachers to develop mainly intercultural collaboration and verbal and non-verbal behaviour, and less so perspective taking (small effect size indicative of little practical significance). There was no change in any of the intercultural skills in the control group and there was no change in intercultural learning. All participants scored very high in intercultural learning prior to the start of the exchange and that could have affected the results. Thus, in relation to the RQ1, the VALIANT VEs contributed to the perceived increase in three out of four intercultural skills.

In addition, quantitative data analysis showed that the most perceived improvement was in the area of intercultural collaboration. However, to better understand the impact of the VEs on the development of intercultural skills, it is important to look more in-depth at the participants' qualitative data that captured their experiences and learning through the

open-ended questions in the surveys. In addition, qualitative data analysis will also help us to understand if there are other important areas of intercultural development that VE facilitates, and the quantitative survey failed to capture. Thus, qualitative data analysis will be triangulated with the quantitative data analysis to further expand answers to RQ1 and RQ2.

Framework for Qualitative Analysis: Codebook

For the analysis of the qualitative data, NVivo was used to support the coding process. The codes established for the analysis of intercultural competence development were created with reference to Byram's (1997, 2020) core intercultural competence model of attitudes, skills and knowledge since it has been widely used to examine the learning outcomes of VE. At the same time, the coding also focused on issues that were identified during the process of analysing the dataset, labelled as "new codes" in the table below. These included rejection of cultural learning and increased awareness of the value of online intercultural collaboration. The following Table 7.2 presents the codebook established for the analysis with its respective codes and subcodes.

Table 7.2. Intercultural Competence Codebook

| CODE | SUB-CODE | EXAMPLE | FREQUENCY |
|--------------------------|---|--|------------------|
| Intercultural Competence | Learning about cultural products and practices | And it was really nice to learn about the different educational systems in the different countries. We also had two teachers from Scandinavia, which was really interesting because they are said to be quite good. | 57 |
| | Online intercultural collaboration skills | What we've learned from the experience is how to identify each person's strengths and use that in our favour to better our collaboration. | 51 |
| | Interest in learning about other cultures / other professional perspectives | Intercultural interaction unfolded during this exchange has further boosted my interest to communicate and collaborate with people from other cultures. | 42 |
| | Perspective-taking | And of course, discussing things from different perspectives and learning to agree or to disagree was one of the main things that we took away from this as well. | 34 |
| | Soft skills (apart from intercultural competence) | Collaborating with fellow German student-teachers, and with German and Italian teachers, in my working group has seen me continue to develop soft skills such as time management, giving feedback, efficient communication, and intercultural awareness. It has brought to my attention different ways of planning and organising one's time, notions of efficiency and expectations from academic meetings. | 23 |

Table 7.2. Continued

| CODE | SUB-CODE | EXAMPLE | FREQUENCY |
|-----------|--|--|-----------|
| | Behavioural aspects (changing behaviour and communication style according to cultural background of interlocutors) | I have learnt to identify diverse communication styles, my German colleagues being more direct, pragmatic and analytical, my Spanish and Italian colleagues producing more inference-based, abstract and motivational messages. Such a finding proved interesting to enhance my assertiveness and manage my cross-cultural public speaking skills. | 14 |
| New codes | Rejection of cultural learning / I have nothing to learn, etc... | I don't think the project has strongly impacted my interaction with people from other cultures. But this is probably due to the fact that I have already had a lot of contact to people from other cultures during stays abroad. However, the project showed my once more how valuable intercultural exchange is. | 44 |
| | Awareness of the value of online intercultural collaboration | I think it is important to improve your work through such exchange programmes and working together with different people. The impact will be that I want to participate as well as a teacher. | 18 |

However, it should also be noted that trying to assess intercultural competence development poses some ethical issues such as difficulties in assessing “internal outcomes” (e.g., personal growth and maturity) and the contextual nature of these internal competences (Borghetti, 2017).

Main Qualitative Findings and Discussion

Based on the analysis of the qualitative data, 5 main themes were identified according to the participants' perceived skill development. These included: (1) perceived intercultural learning, (2) perceived intercultural collaboration skills development, (3) perceived intercultural perspective taking, (4) perceived intercultural behaviour and (5) perceived increased awareness of the value of online intercultural collaboration in education.

Perceived Intercultural Learning

Perceived intercultural learning can be defined as VE participants' perceptions in terms of increased knowledge and interest about cultural products and practices. It was identified in those statements where VE participants showed to have learned factual aspects about different cultures or educational systems as well as interest in learning about other cultures and/or other professional perspectives.

In this regard, participants frequently reported having acquired increased knowledge and awareness of cultural differences and similarities in terms of educational practices and approaches. Reflections on education systems, teaching contexts and practices, common or similar problems or challenges in teaching and learning abounded in the data set:

I have learned about various cultural responses to different situations: the different ways teachers in Germany, Sweden, etc. have responded to COVID-19 and adjusting teaching around that, as well as the resources, or lack of, the different countries have for special needs teaching, and how different school security is compared to America. I have learned the topics about the education system of Brazil, the way they teach English, their English Language teaching programme and so on. By discussing these topics with distant partners, it influenced me and contributed a lot to me on how I can teach English to learners from different backgrounds.

As could be seen in quantitative analysis (earlier in this chapter) participants perceived they improved intercultural learning the least (e.g., no significant change). This was largely due to the fact that, prior to the VE, participants had an average score of 90 on a 100-point scale with little room for improvement. The qualitative data provides further information

as to why this was the case. Especially in relation to the question “Has your Virtual Exchange project impacted on how you interact with people from other cultures?” Numerous examples could be identified where participants reported not having learned or not having anything new to learn from intercultural interaction. Participants’ perceptions in these statements revealed the widely held belief that intercultural competence is a skill that can be “learned” instead of a lifelong learning process. This was evident in the reasons individuals provided to justify their claims, such as:

Previous international mobility experiences:

I was an Erasmus student, I learned a lot about different cultures, so this is not really new to me.

Having lived in multicultural societies:

I was used to being friends with people from different cultures before, so it was familiar territory.

or having participated in online projects before:

As it's not my first VE, I can't say this has had that big of an impact.

O’Dowd (2023) in reflecting on this phenomenon explains that the situations in which participants “reject” or “undervalue” intercultural learning as a result of the online intercultural collaboration experience constitute a limitation to the learning process. While intercultural learning will vary and will have different impacts on individuals depending on their previous intercultural experiences as the above-mentioned examples illustrate, they should still be encouraged to develop openness and curiosity to cultural difference. Therefore, VE participants should be taught that intercultural competence is to be approached by individuals as a lifelong learning process.

At the same time, another theme that emerged from the qualitative data set was rejection of cultural learning arguing that “deep down we are all the same”:

We are all people after all, so nothing is different.

This tendency of participants in VEs to resort to minimisation of difference (Bennett, 1993) in their argumentations has been already identified

in previous research as a negative outcome of online intercultural collaboration (the EVALUATE group, 2019; O’Dowd, 2021).

Perceived Intercultural Collaboration Skills

Perceived intercultural collaboration skills development was identified in those statements in which VE participants reported what they learned about collaborating online in intercultural groups. Roy (2012) identified the skills needed for working in virtual collaboration teams as involving relationship building, communication, collaboration, and technological skills. Similarly, Kolm et al., (2022) define intercultural collaboration skills as a skill set including “ICT, intercultural and cultural, communication and language, self-management and organization, collaboration, and domain-specific competences” (Kolm et al., 2022).

The quantitative analysis identified intercultural collaboration as the skill that showed the greatest overall improvement in all three rounds of implementation. The qualitative results corroborate this idea, as the development of online intercultural collaboration skills by VE participants was the second most frequently occurring code in the qualitative dataset. This resonates with the findings of other studies in the context of teacher education that have pointed to the potential of VE as an enabler for the development of competences related to intercultural collaboration (Waldman et al., 2016; Grau & Turula 2019; O’Dowd & Dooly, 2022).

Overall, participants demonstrated that they had developed their awareness of strategies for overcoming the challenges of online intercultural collaboration as the following example illustrates:

Sometimes I missed some more fluidity in the interactions. In order to improve these I found it helpful to stick less to the questions we “have to” ask, but be more flexible and try some smalltalk in order to break the ice at the very beginning of each meeting.

The challenges participants more frequently reported having to deal with were inherent to the communicative scenario (i.e., online and intercultural) and entailed issues such as managing and/or leading collaborative tasks, gathering the online group or handling issues such as time difference, varied priorities or one’s own reaction under stressful situations. In response to these challenges, participants reported implementing strategies of a

varied nature such as the assignment of group roles, work division, collaborative decision making, time management or turn taking strategies. Participants also identified as effective being proactive and participative as well as prioritising communication (i.e., openly sharing ideas and thoughts). These strategies go in line with the characteristics of successful collaboration as identified by Vinagre (2015) characterised by “consistent participation, prompt communication, regular group discussion, timely and relevant contributions, and commitment to the task (task organisation, joint responsibility)” (p. 799).

Participants also referred to the importance of showing positive attitudes such as being cooperative or flexible and paying attention to the other’s cultures and what they felt comfortable with. This is similar to the findings by Gleason and Jaramillo (2021) where a model of VE that focused on global collaboration was seen to encourage pre-service teachers to become culturally aware as well as to develop reflective and emotional skills such as empathy.

Perceived Intercultural Perspective Taking

Perceived intercultural perspective taking was identified in those statements showing the VE leading participants to become aware of other cultural or professional perspectives.

In terms of intercultural perspective taking, the quantitative results can be better understood looking at the qualitative findings. Participants’ perceived improvement in intercultural perspective taking was significant but small in quantitative terms. This is reflected in the qualitative data where, in many cases, participants reflected on the intercultural experience as leading them to a re-evaluation of their own perspectives. However, while most participants reported having acquired a broader horizon or having become culturally aware, there was a lack of detail and argumentation on how perspectives changed. For instance:

The discussions with my colleagues made me rethink a lot of issues about my own culture.

Another aspect that stood out regarding perceived perspective taking was referring to the experience as key to leaving behind the perception

of interaction and/or collaboration with partners from other cultures as something difficult, challenging or biased by prejudices. In this regard, the literature has suggested that receiving support or training during the VE about online intercultural communication and collaboration can be key in preventing learners from forming and/or helping them to overcome stereotypes or misconceptions about their international partners (Belz, 2003; Guth et al., 2012). At the same time, it has also been acknowledged that intercultural interaction per se does not ensure intercultural learning pointing to the importance of providing “culturally rich encounters” (Richardson, 2016) for participants to be able to engage with different cultures in meaningful ways that can allow them to reduce prejudices and stereotypes.

Teachers and student teachers reported how valuable it was for them to exchange ideas, challenges and practices with teachers from other cultures and to get to know new perspectives on teaching and learning. At the same time, participants signaled as key for the generation of new opinions as well as for the identification of common and differing points in their cultures and educational systems, being able to regularly engage in debating about different education-related topics of their interest. The following excerpt illustrates this:

Exchanging ideas with others of my line of work and learning new cultural aspects broadened my view on education.

Perceived Intercultural Behaviour

The quantitative analysis also revealed small and significant improvement in intercultural verbal and non-verbal behaviour which can be defined as changing behaviour and communication style according to the cultural background of interlocutors (Bennett, 2017). The qualitative findings go in this line as behavioural aspects were found in the data set, yet they were not amongst the most coded themes. This could be because participants were not asked about this specific aspect and the references to it were proactively provided by individuals. Overall, participants mentioned paying attention to each other’s body language, register or vocabulary use as well as to regulating one’s own to reach communicative effectiveness. For example:

I've realised our body languages are different and I stopped using body language signals that belong to my culture only to increase the efficiency of the communication between us.

VE has been seen in the literature as contributing to participants' awareness of intercultural communicative norms and styles (Godwin-Jones, 2019). In the VEs analysed, participants were indeed able to identify specific strategies such as turn-taking strategies, culture-specific expressions, gestures of dis/agreement, trying to make the deadlines and instructions clear by repeating, asking questions again or backtracking and switching wording so that their partners were able to better understand their ideas.

Teachers and student teachers also included references to intercultural behaviour in relation to their teaching, reporting that participating in the VEs helped them to become aware of the importance of adapting the communicative style to reach an intercultural audience accordingly:

I will modify my behaviour to fit an international setting going forward if my class contains people from other cultures.

Perceived increased awareness of the value of online intercultural collaboration in education

Participants' reflections revealed an increased awareness of the importance of engaging in online intercultural interaction and collaboration. The arguments provided revealed that student teachers and teachers attached value to the experience both for themselves as participants for professional development:

As a teacher, I think it is important to improve your work through such exchange programmes and working together with different people.

as well as for the students' learning:

I grasped the importance of such an experience and I decided to integrate similar projects into my lessons in the future).

However, as Waldman et al. (2016) warn, while participating in VE tends to increase teachers' perceived self-efficacy and willingness to implement such projects, teachers will still need to test their perceived competence by facing actual implementation.

Another subtheme that emerged was the perceived value of such communicative scenario for participants' acquisition of confidence and willingness to engage in intercultural communication and collaboration:

I realised that international cooperation is not as difficult as one often thinks. I would like to do more projects like this. Now, I feel more willing and confident about communicating with other people from different cultures.

This is in line with previous findings in the literature that acknowledge how VE contributes to shifting attitudes. Helm and Van der Velden (2020), for instance, in the Erasmus+ Virtual Exchange, 2019 Impact Report identified participants' gain in terms of curiosity, self-esteem and friendliness towards people of different ethnic and religious backgrounds as a result of their participation in VE.

Conclusion

It has been seen throughout the VALIANT project results, as well as in the literature, that participating in intercultural communication and/or collaboration does not ensure intercultural competence development (Leask, 2015). Therefore, to encourage this type of learning, educational institutions and educators should engage learners in carefully designed projects in which the intercultural experience moves beyond superficial comparison of cultural practices and requires international students to collaborate on meaningful tasks as well as to critically reflect on interculturality (Richardson, 2016; Helm & O'Dowd, 2020).

The main challenge to intercultural competence development identified had to do with participants' conceptions in relation to it. Both quantitative and qualitative data revealed how participants wrongly perceived it as a skill that is done or achieved. This is evident through lack of reported interest in intercultural learning in the quantitative data in particular. Therefore, the need to train individuals to recognise intercultural competence as a lifelong learning process has been identified.

Another misconception about intercultural learning was evident through participants' argumentations in which they resorted to minimisation of difference. This phenomenon, commonly reported as a negative outcome of VE, was termed by Ware and Kramsch (2005) as "the illusion of commonality". This could also be addressed by offering VE participants training in this aspect.

In contrast, the perceived development of online intercultural collaboration skills stood out in both quantitative and qualitative data sets. Overall, participants reported having developed their awareness of strategies for overcoming the challenges of online intercultural collaboration. Teachers and student teachers attached special relevance to the acquisition of intercultural collaboration skills for the teaching career referring to aspects such as willingness, confidence and ability to work in intercultural teams as well as to work collaboratively online and build high quality digital pedagogical materials.

Similarly, in the VEs analysed, participants also reported being able to identify specific strategies in terms of intercultural communicative norms and styles. In addition, teachers and student teachers both acknowledged the importance of intercultural behaviour in teaching. They have reported that participating in the VEs increased their awareness of the importance of adapting their communicative style to reach an intercultural audience.

In terms of perceived intercultural perspective taking, the VALIANT VEs helped participants to overcome stereotypes and misconceptions about their international partners. However, while participants reflected on the intercultural experience as leading them to a re-evaluation of their own perspectives, there was a lack of detail and argumentation on how perspectives changed. It would therefore be advisable in future VEs to try to encourage more explicit reflection in this regard if this aspect is to be explored.

Finally, participants' reflections also revealed an awareness of the benefits that engaging in online intercultural interaction and collaboration present for teachers. Participants valued the VE experience for helping them build their confidence and willingness to engage in intercultural communication and collaboration.

References

- Avgousti, M. I. (2018). Intercultural communicative competence and online exchanges: A systematic review. *Computer Assisted Language Learning*, 31(8), 819–853. <https://doi.org/10.1080/09588221.2018.1455713>
- Baroni, A., Dooly, M., Garcés García, P., Guth, S., Hauck, M., Helm, F., Lewis, T., Mueller-Hartmann, A., O’Dowd, R., Rienties, R. & Rogaten, J. (2019) Evaluating the impact of Virtual Exchange on initial teacher education: A European policy experiment. Research-publishing.net. <https://doi.org/10.14705/rpnet.2019.29.9782490057337>
- Belz, J. A. (2003). Linguistic perspectives on the development of intercultural competence in telecollaboration. *Language Learning & Technology*, 7(2), 68–99. Retrieved from <http://lt.msu.edu/vol7num3/belz>
- Belz, J. A. (2004). Learner corpus analysis and the development of foreign language proficiency. *System*, 32(4), 577–591. <https://doi.org/10.1016/j.system.2004.09.013>
- Bennett, M. J. (1993). *Towards ethnorelativism: A developmental model of intercultural sensitivity* (revised). In R. M. Paige (Eds.), *Education for the intercultural experience* (pp. 81–120). Yarmouth, ME: Intercultural Press.
- Bennett, M. (2017). Development model of intercultural sensitivity. In Y. Kim (Eds.), *International encyclopedia of intercultural communication*. Wiley.
- Borghetti, C. (2017). Is there really a need for assessing intercultural competence? *Journal of Intercultural Communication*, 44 (1). Retrieved from <http://mail.immi.se/intercultural/nr44/borghetti.html>
- Byram, M. (1997). *Teaching and assessing intercultural communicative competence*. Multilingual Matters.
- Byram, M. (2008). *From foreign language education to education for intercultural citizenship: Essays and reflections*. Multilingual Matters.
- Byram, M. (2020). *Teaching and assessing intercultural communicative competence: Revisited*. Multilingual Matters.
- Chun, D. M. (2015). Language and culture learning in higher education via telecollaboration. *Pedagogies: An International Journal*, 10(1), 5–21. <https://doi.org/10.1080/1554480X.2014.999775>

- Council of Europe. (2016). *Competences for democratic culture – Living together as equals in culturally diverse democratic societies*. Council of Europe.
- 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/10.1177/102831530628>
- Dooly, M., & Sadler, R. (2020). “If you don’t improve, what’s the point?” Investigating the impact of a “flipped” online exchange in teacher education. *ReCALL*, 32(1), 4–24. <https://doi.org/10.1017/S0958344019000107>
- Gleason, B., & Jaramillo Cherez, N. (2021). Design thinking approach to global collaboration and empowered learning: Virtual exchange as innovation in a teacher education course. *TechTrends*, 65(3), 348–358.
- Velden, B., & Helm, F. (2020). *Erasmus+ Virtual Exchange – Intercultural learning experiences – 2019 impact report*, European Commission, European Education and Culture Executive Agency, Publications Office. <https://data.europa.eu/doi/10.2797/513584>
- EVOLVE Project Team. (2020). The impact of Virtual Exchange on student learning in higher education: EVOLVE Project Report. https://pure.rug.nl/ws/portalfiles/portal/151666892/EVOLVE_project_report_impact_student_learning_Final_version_201222.pdf
- The EVALUATE Group. (2019). Evaluating the impact of Virtual Exchange on initial teacher education: A European policy experiment. Research-publishing.net. <https://eric.ed.gov/?id=ED593741>
- Furstenberg, G., Levet, S., English, K., & Maillet, K. (2001). Giving a virtual voice to the silent language of culture: The cultura project. *Language Learning & Technology*, 5(1), 55–102. Accessed 26 September 2023 at <https://www.lltjournal.org/item/2342>.
- Furstenberg, G., & Levet, S. (2014). Cultura: From then to now. Its origins, key features, methodology, and how it has evolved. Reflections on the past and musings on the future. In D. M. Chun (Eds.), *Cultura-inspired intercultural exchanges: Focus on Asian and Pacific languages* (pp. 1–31). Honolulu, Hawaii: University of Hawaii, National Foreign Language Resource Center.
- Godwin-Jones, R. (2019). Telecollaboration as an approach to developing intercultural communication competence. *Language Learning & Technology*, 23(3), 8–28. <http://hdl.handle.net/10125/44691>

- Grau, M. K., & Turula, A. (2019). Experiential learning of telecollaborative competences in pre-service teacher education. *Language Learning & Technology*, 23(3), 98–115. <http://scholarspace.manoa.hawaii.edu/handle/10125/44698>
- Guth, S., Helm, F., & O’Dowd, R. (2012). University language classes collaborating online. *A report on the integration of telecollaborative networks in European universities*.
- Gutiérrez, B. F., Glimäng, M. R., O’Dowd, R., & Sauro, S. (2021). *Mentoring handbook for Virtual Exchange teachers. Strategies to help students achieve successful synchronous and asynchronous online intercultural communication*. Stevens Initiative <https://www.stevensinitiative.org/resource/mentoring-handbook-for-virtual-exchange-teachers/>.
- Gutiérrez, B. F., Reljanovic Glimäng, M., Sauro, S., & O’Dowd, R. (2022). Preparing students for successful online intercultural communication and collaboration in Virtual Exchange. *Journal of International Students*, 12, 149–167. <https://doi.org/10.32674/jis.v12iS3.4630>
- Helm, F., & Van der Velden, B. (2019). *Erasmus+Virtual Exchange impact report 2018*. Publications Office of the European Union, Luxembourg. Retrieved from <https://op.europa.eu/en/publication-detail/-/publication/a6996e6a9d2-11e9-9d01-01aa75e-d71a1/language-en/format-PDF>
- Helm, F., & O’Dowd, R. (2020). Virtual Exchange and its role in blended mobility initiatives. *UNICollaboration Position Paper*. <https://www.unicollaboration.org/wp-content/uploads/2020/09/Position-paper-on-Blended-Mobility.pdf>
- Hymes, D. (1972). On communicative competence. *Sociolinguistics*, 269293, 269–293.
- Kolm, A., de Nooijer, J., Vanherle, K., Werkman, A., Wewerka-Kreimel, D., Rachman-Elbaum, S., & van Merriënboer, J. J. (2022). International online collaboration competencies in higher education students: A systematic review. *Journal of Studies in International Education*, 26(2), 183–201. <https://doi.org/10.1177/10283153211016272>
- Kramsch, C. (1993). *Context and culture in language teaching*. Oxford university Press.
- Leask, B. (2015). *Internationalising the curriculum*. Routledge.

- Lindner, R. (2016). Developing communicative competence in global virtual teams: A multiliteracies approach to telecollaboration for students of business and economics. *CASALC Review*, 5(1), 144–156.
- Muller-Hartmann, A. (2007). Teacher role in telecollaboration: Setting up and managing exchanges. In *Languages for Intercultural Communication and Education*, 15, 167–192.
- Nissen, E., & Kurek, M. (2020). *The impact of Virtual Exchange on teachers' pedagogical competences and pedagogical approach in higher education*. <http://hdl.handle.net/11370/bb89998b-c08b-41f4-ae6-08faf1208433>
- OECD. (2018). *Preparing our youth for an inclusive and sustainable world*. The OECD PISA Global Competence Framework. <https://www.oecd.org/pisa/Handbook-PISA-2018-Global-Competence.pdf>
- O'Dowd, R. (2021). Virtual exchange: Moving forward into the next decade. *Computer Assisted Language Learning*, 34(3), 209–224. <https://doi.org/10.1080/09588221.2021.1902201>
- O'Dowd, R. (2023). *Internationalising higher education and the role of Virtual Exchange*. Taylor & Francis.
- O'Dowd, R., Sauro, S., & Spector-Cohen, E. (2020). The role of pedagogical mentoring in Virtual Exchange. *TESOL Quarterly*, 54(1), 146–172. <https://doi.org/10.1002/tesq.543>
- O'Dowd, R., & Dooly, M. (2022). Exploring teachers' professional development through participation in Virtual Exchange. *ReCALL*, 34(1), 21–36. <https://doi.org/10.1017/S095834402000215>
- Richardson, S. (2016). *Cosmopolitan learning for a global era: Higher education in an interconnected world*. Routledge.
- Risager, K. (2007). *Language and culture pedagogy: From a national to a transnational paradigm*. Vol. 14. Multilingual Matters.
- Roy, S. R. (2012). Virtual collaboration: The skills needed to collaborate in a virtual environment. *Journal of Internet Social Networking & Virtual Communities*, 2012, 1–8. <https://doi.org/10.5171/2012.629512>
- Stevens Initiative. (2020). Virtual exchange typology. The-Aspen-Institute. www.stevensinitiative.org/resource/virtual-exchange-typology/
- Symeonidis, V., & Impedovo, M. A. (2023). Where internationalisation and digitalisation intersect: designing a Virtual Exchange to enhance student teachers' professional awareness as European teachers. *European*

- Journal of Teacher Education*, 1–19. <https://doi.org/10.1080/02619768.2023.2243644>
- UNESCO. (2014). Global citizenship education: Preparing learners for the challenges of the twenty-first century. UNESCO. <http://unesdoc.unesco.org/images/0022/002277/227729e.pdf>
- Vinagre, M., & Corral-Esteban, A. (2019). Tracing the development of intercultural competence in telecollaborative interaction: An analysis of evaluative language in eTandem exchanges. In Tardieu, C., & Horgues, C. (Eds.), *Redefining tandem language and culture learning in higher education* (pp. 95–112). London: Routledge.
- Vinagre, M. (2015). Training teachers for virtual collaboration: A case study. *British Journal of Educational Technology*, 47(4), 787–802. <https://doi.org/10.1111/bjet.12363>
- Waldman, T., Harel, E., & Schwab, G., (2016). Getting their feet wet: Trainee EFL teachers in Germany and Israel collaborate online to promote their telecollaboration competence through experiential learning. In S. Jager, M. Kurek, & B. O'Rourke (Eds.), *New directions in telecollaborative research and practice: Selected papers from the second conference on telecollaboration in higher education* (pp. 179–184). Research-publishing.net.
- Ware, P. (2005). “Missed” communication in online communication: Tensions in a German-American telecollaboration. *Language Learning & Technology*, 9(2), 64–89. <https://doi.org/10.1111/j.1540-4781.2005.00274.x>
- Ware, P. D., & Kramsch, C. (2005). Toward an intercultural stance: Teaching German and English through telecollaboration. *The Modern Language Journal*, 89(2), 190–205. <https://doi.org/10.1111/j.1540-4781.2005.00274.x>
- Wu, S. (2021). Unpacking themes of integrating telecollaboration in language teacher education: A systematic review of 36 studies from 2009 to 2019. *Computer Assisted Language Learning*, 1–23. <https://doi.org/10.1080/09588221.2021.1976800>