



VIRTUAL EXCHANGE AND 21ST CENTURY TEACHER EDUCATION

INTRODUCTION

Students of Initial Teacher Education need to be prepared for the classrooms of tomorrow. Teachers require the necessary skills and competences to teach in culturally diverse contexts, to collaborate across disciplines and to use technologies in innovative ways. Virtual Exchange is a ground-breaking method of engaging students in online intercultural collaboration projects with partner classes within their programmes of study. The Erasmus+ KA3 European Policy Experiment EVALUATE (Evaluating and Upscaling Telecollaborative Teacher Education) brought together universities and public authorities from across Europe to carry out a large-scale study of the impact of Virtual Exchange on students engaged in Initial Teacher Education and to upscale its use in this areas. This document is a brief introduction to Virtual Exchange and a summary of the EVALUATE project findings.



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What is Virtual Exchange?

Virtual Exchange involves the engagement of groups of learners in extended periods of online intercultural interaction and collaboration with partners from other cultural contexts as an integrated part of their educational programmes and under the guidance of educators. Virtual Exchange is based on student-centred, international and collaborative approaches to learning where knowledge and understanding are constructed through interaction and negotiation with students from other cultures.

How does Virtual Exchange work in Initial Teacher Education?

- Teacher trainers in different countries come into contact and develop a joint curriculum for their exchange.
- During their semester, students from both classes work together online, discussing issues related to their curricula and collaborating to create educational materials and activities.
- The teacher trainers guide students in their online interactions and in their reflections on this experience.
- At the end of the exchange, students receive academic credit for their work by submitting portfolios, essays or making presentations about their collaboration with their international partners.



How does Virtual Exchange differ to other methodologies?

- Virtual Exchange is a collaborative form of learning which engages students in regular communication with partners from other nationalities.
- Virtual Exchange gives student teachers first-hand experience of communicating online in different languages and learning in an open, inclusive environment where participants are encouraged to engage positively with difference.
- Virtual Exchange costs less than study abroad and is also more inclusive as anyone with access to an internet connection can participate.
- Virtual Exchange projects help to prepare student teachers to use innovative activities such as eTwinning in their own classrooms in the future.

What is the EVALUATE project?

EVALUATE (Evaluating and Upscaling Telecollaborative Teacher Education: <http://www.evaluateproject.eu/>) is a European Policy Experimentation which studied the impact of Virtual Exchange on student teachers involved in Initial Teacher Education across Europe. Between 2017-18, the project consortium trained teacher trainers and organised Virtual Exchanges which involved over 1000 students at Initial Teacher Training institutions. We then analysed the learning gains from these exchanges using qualitative and quantitative research methodologies. We are now working with ministries of education to upscale the use of Virtual Exchange in teacher education across Europe.

EVALUATE involved:

- 33 Virtual Exchange projects between classes of Initial Teacher Education at 52 Teacher Training institutions
- 1018 students of Initial Teacher Education taking part in the Virtual Exchanges and the data collection process.
- Quantitative and qualitative research instruments collecting data on students' digital, intercultural and linguistic competence development as well as on the learning experiences of both students and teacher trainers.

What are the initial findings of the EVALUATE project?

Policy documents on Initial Teacher Education underline the need for 21st century teachers to be digitally competent and better prepared to engaged their students in online collaborative learning. The *European Education Monitor* reports that currently in European schools “...ICT is mostly used as a remedial tool” and “...few teachers report using ICT for communication in which students are involved, leaving untapped the potential to connect students together” (2015: 59). Similarly, the ET2020 Working Group on Schools Policy underlines the need to promote innovative approaches to Initial Teacher Education and “...shift away from isolated classrooms towards new methods based on broad collaboration” (2015: 2).

The initial findings from the EVALUATE European Policy Experiment confirm the following:

- Students found Virtual Exchange to be a highly positive learning experience and believed the experience would be useful for their future career as teachers.
- Students would recommend other student teachers to do Virtual Exchange in their courses and would also like to see Virtual Exchange included in other teacher education courses in their degrees.
- Virtual Exchange strongly contributes to the development of students' digital competence and aspects of intercultural competence.
- Virtual Exchange also contributes to collaborative and plurilingual competences.



Virtual Exchange develops students' digital competence

The European Policy Experiment demonstrated that the student teachers who took part in Virtual Exchange developed digital competence in the form of **technological pedagogical content knowledge** (TPACK, Mishra & Koehler, 2006). This well-known framework captures how a teacher's understanding of content, pedagogy, and technology interrelates and impacts on effective teaching. By using a variety of online tools and applications with their international partners - working together on tasks and reflecting on the use of these tools and apps in their future classrooms - student teachers developed **technology knowledge**. Both in the control group and the intervention group TPACK scores significantly increased over time. However, the gains in the intervention group were significantly larger than in the control condition.

The student teachers' gain in **technological pedagogical knowledge**, that is how their teaching of subjects ranging from foreign languages and history to mathematics can be enhanced through technology, was similarly important. The same applies to their awareness of how using **technology can improve their future students' learning**:

"I didn't know Prezi before, and I thought the platform is hard to work with, so I hadn't used it, but when we started to work on the task, I decided to try it out, so our group figured out how to use it. I would definitely use it as a teacher because it offers variety and helps create interesting presentations."

"Thanks to this exchange I have not only discovered new tools but reflected about them and applied them into a task that could be perfectly used in a real class."

Virtual Exchange develops collaborative competence

It is fundamental for young people to learn how to collaborate with others and to face the challenges that such collaboration may involve, such as the negotiation of linguistic, technical and/or cultural barriers. The world and its problems are increasingly complex and interdependent, and it is through interaction and collaboration and interaction that these problems can begin to be addressed.

Our European Policy Experiment demonstrated that Virtual Exchange allows future teachers to develop collaborative competence through reflexive, experiential learning that immerses them in a collaborative, intercultural project. Students perceived their exchanges a **valuable learning experience** that they can then pass on to their pupils when they are teachers and have their classes collaborate with other classes.

"It was challenging for me to work on the final project in an intercultural group because my group members and I are super creative, decisive and opinionative, however when I look at the opposite side of the coin, I know when it's the time to compromise about my ideas, be tolerant and give a credit to other suggestions too."

"I think it is a great experience as you get to share your ideas with people from other cultures who have different life experiences so you learn from each other. Now that the world is globalized it is important that we learn how to collaborate with people from other countries."

Virtual Exchange develops students plurilingual competence

Virtual Exchange also contributes to the attainment of plurilingual competence. Asked how their ability to use a foreign language had developed in the course of their Virtual Exchange, student teachers identified improvements in several aspects of their foreign language use.

Significant numbers of participants report that two specific competences benefited most from their taking part in Virtual Exchange. These are the **'ability to interact with foreign language speakers'** and **'confidence in using the foreign language'**. In fact, they go hand in hand, since research suggests that such confidence is derived from regular contact with foreign language speakers (Clément, Baker & MacIntyre, 2003). What is more, communicative confidence drives the willingness to communicate. That is a virtuous circle that can be hard to achieve in conventional language classrooms. The evidence for it in our data points to another potential strength of Virtual Exchange: It can support the development of confident, competent, plurilingual communicators. Testimony to this can be found in the following comments from participants:

"While communicating with my peers I tried to adjust my language so as not to sound too sophisticated nor stiff."

"I think that I've developed my speaking and communicative skills during our video conferences and chats, where the main idea was not to show off about our language competences, but to be understood and efficient in our work."

"I think I have learnt how to pay somebody a compliment in a million different ways."

Virtual Exchange develops inclusiveness in Initial Teacher Education

Inclusiveness means engaging with difference and harnessing this to create a positive learning environment for all. Teachers are key players in creating inclusive societies as it is they who reach young and often marginalized pupils and can 'make the difference'. It is teachers that can empower their pupils by using technology to offer an educational experience that is relevant to their lives on both local and global levels. Quantitative data from the experimental study shows that there was a statistically significant increase in intercultural effectiveness¹ for exchange participants, but not for the control groups.

Virtual exchange is an inclusive practice that can offer future teachers the opportunity to engage constructively with difference and contribute to the creation and maintenance of welcoming, inclusive spaces as they interact and collaborate online. Many of the participants in the pilot project reported coming from quite homogeneous societies but the virtual exchange offered the experience of working in an intercultural team. Participants reflected positively on their engagement with diverse ideas and perspectives, languages and cultures, and wrote about what they learned from their interactions. Our analysis of participant reflections found they reported building confidence and losing personal fears through the exchange, learning to negotiate with peers who have different opinions or ways of thinking, managing to see issues from different perspectives and solving problems.

"I feel very well, since nowadays the classrooms in elementary schools are multicultural and it is good that as future teachers we can generate the curiosity of children to know other cultures through activities."

"I have loved working as an intercultural team. The reason is that we can share different points of view while we design activities. In this way, we can help each other to see what things we can improve or change, in order to finish with a proper product, having as final goal our students learning process."

¹ Portalla and Chen's (2010) intercultural effectiveness scale was used

What were the experiences of teacher trainers using Virtual Exchange?

Extensive interviews were carried out with the teacher trainers who took part in the EVALUATE training programme and then ran the Virtual Exchanges in their classes. The principle outcomes from these interviews were the following:

The teacher trainers believed that participating in a Virtual Exchange provided their students with invaluable intercultural learning experiences as well as the opportunity for authentic use of their foreign languages.

The teachers reported that the Virtual Exchange had impacted on their own professional practices by providing them with opportunities to collaborate with colleagues internationally, to innovate their classes and to improve their own teaching methods.

“We’ve set up an official cooperation agreement between our two institutions. And I’m taking my class to my partner’s country in May so they will meet each other face to face. There will also be a joint conference between our two institutions. I disseminated this project in our institution and now there are other colleagues who are interested in collaborating with the Israelis. So we are going to have a joint conference in October in Tel Aviv. I couldn’t have imagined this three years ago.”

The biggest challenges which teacher trainers encountered during their exchanges were related to time management and to the lack of sufficient technological infrastructure at their institutions.

Teacher trainers reported that the main support measures which they would like to have from their institutions and public authorities in order for Virtual Exchange to be more successful included the provision of recognition for the added work which the activity can involve and also increased training opportunities and support for finding partner classes.

“[Teachers need]....a recognition of what we are doing. I believe teachers get motivated when what they do is valued. And this can be valued by giving them recognition for their work.”



How can we support Virtual Exchange and extend its use in Initial Teacher Education?

Higher Education Institutions can...

- increase the number of teacher-training programmes for staff.
- offer teachers extra credit for carrying out Virtual Exchange in their classes.
- mention participation in Virtual Exchange in students' European Diploma Supplement.
- award students credits for participating in Virtual Exchange.
- make Virtual Exchange part of their internationalisation at home strategy.

Regional & National Ministerial Authorities can...

- provide funding for further teacher training programmes for teacher educators in their countries/regions.
- incorporate Virtual Exchange into the Public Authorities' projects and initiatives.
- mention and recommend Virtual Exchange in Public Authorities' publications and strategy papers.
- promote Virtual Exchange to counterparts in other regions/countries and to the Educational decision makers in EC.

The European Union and Erasmus+ can...

- raise awareness of Virtual Exchange as a valid part of universities' internationalisation policies.
- increase funding for projects and research initiatives related to the activity.
- encourage greater collaboration between Virtual Exchange initiatives at university level and those at pre-university level (e.g. etwinning).

The final conference of the EVALUATE project on the theme of Virtual Exchange and Teacher Education will take place at the University of León, Spain on 4-6 September 2019. The full report of this European Policy Experiment will be available on the EVALUATE website in 2019: <http://www.evaluateproject.eu/>. Further information is also available by contacting: evaluateprojecteu@gmail.com

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