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Evaluating and Upscaling Telecollaborative Teacher Education (0333)

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Introduction

Telecollaboration, also known as Virtual Exchange, involves engaging learners in task-based interaction and collaborative exchange with fellow students in other locations through online communication technologies with the aim of developing their intercultural, foreign language and digital competences (O'Dowd & Lewis, 2016).

There already exists a large number of small-scale studies which provide evidence to support the claims that by being engaged in online collaborative project work together with partners from different cultures, trainee-teachers will develop linguistic intercultural and digital-pedagogical competences which they will later employ in their own teaching (Dooly & Sadler, 2016; Guth & Helm, 2010). However, these beliefs require thorough interrogation, and a recent review of the literature (O'Dowd, 2016) established that there is still a need to complement and corroborate the existing small-scale studies by providing large-scale empirical evidence of the impact of telecollaborative exchange on trainee-teachers' competences.

Current research is part of the EVALUATE (*Evaluating and Upscaling Telecollaborative Teacher Education*) project responds to the concern of the participating national and regional public authorities that the increased availability of online technologies in teacher education is not being accompanied by the integration of student-centred, innovative and collaborative approaches to teaching. With this in mind, EVALUATE will test one online collaborative approach – telecollaborative exchange – and assess its impact on the development of intercultural and digital-pedagogical competences for trainee teachers.

Research questions:

1. Will telecollaboration have a positive impact on future teachers' digital-pedagogical competence?
2. Will telecollaboration have a positive impact on future teachers' intercultural competence?

Method

The data was collected during the Autumn semester of academic year 2017/2018. In order to test whether telecollaborative exchange was effective in developing desired competences, the control group and telecollaborative exchange group of students were assessed in the beginning and end of a semester on the level of their competences. The experimental group (telecollaborative exchange group) comprised of 496 students from the 17 exchanges that lasted between four weeks and four months. Students were assessed on their digital pedagogical skills and intercultural competences at the beginning of the telecollaborative exchange and at the end of the exchange. In terms of demographic composition, the sample comprised of 136 males and 356 females with mean age of 24 years old (SD = 5.4). The main language of the exchange was English and all exchanges adopted synchronous as well as asynchronous communication. During the exchange participants had to complete 3 collaborative tasks and complete reflective learner diaries.

The control group comprised of 76 students and 33 were males and 42 were females with the mean age of 21 years old (SD= 2.1). The control group of students comprised of same level students studying at the same university same subjects, but who were not enrolled into the telecollaboration. Due to the originally small classes in some universities the control group of students was mainly comprised of students from Spain and Hungary.

Both groups of students (control and experimental) completed Technological Pedagogical Content Knowledge (TPACK) scale (Schmidt et al, 2010) and Intercultural Effectiveness Scale (Portalla & Chen, 2010). In addition, at the end of a semester student had to evaluate how effective they thought the telecollaborative exchange was in developing their intercultural and digital-pedagogical knowledge. The data was analysed using repeated measures t-test.

Results

The results showed that students in the telecollaborative group significantly develop their *technology knowledge* ($t_{(339)} = -8.793$, $p < 0.001$), *technology pedagogical knowledge* ($t_{(339)} = -9.922$, $p < 0.001$), *technology content knowledge* ($t_{(339)} = -7.027$, $p < 0.001$) and *technological pedagogical content knowledge* ($t_{(339)} = -10.011$, $p < 0.001$). However, there was no difference between the pre-test and post-test results in the control group. The graphical representation of the results for the test group are presented in Figure 1 below.

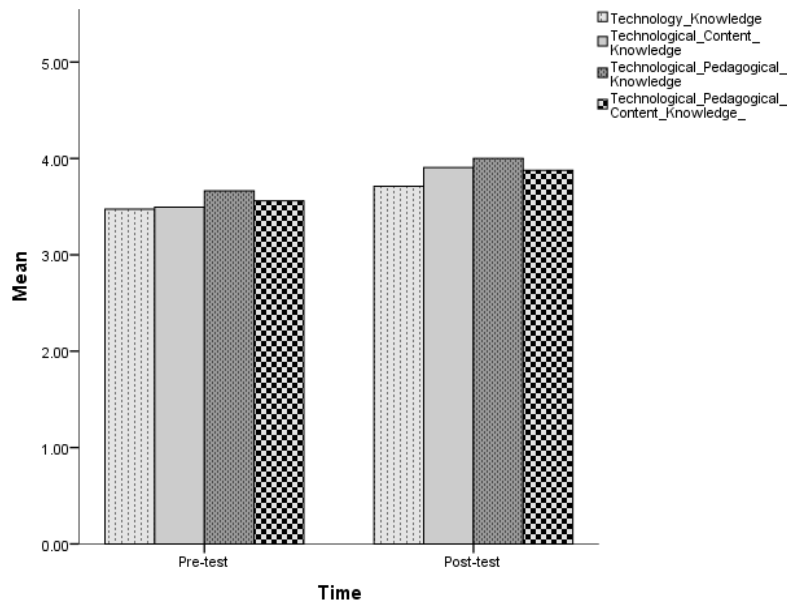


Figure 1: Pre-test and Post-test results of Technological Pedagogical Content Knowledge in the telecollaborative group.

In terms of the intercultural competence, students in a telecollaborative exchange ($t_{(337)} = -5.380$, $p < 0.001$) and control group ($t_{(62)} = -2.928$, $p < 0.05$) reported to improve on their competences, but the improvement was stronger in the test condition. The graphical results for the two groups are presented in a Figure 2 below.

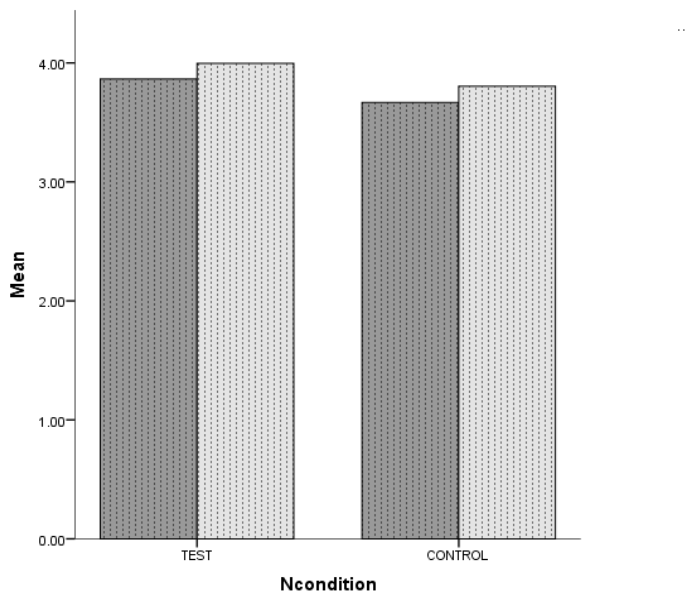


Figure 2: Dark colour presents results of the pre-test and light colour presents the results of the post-test on intercultural competences in the telecollaborative intervention and control groups.

In terms of the perceived value, we have examined what participants thought about importance of telecollaboration as part of their course. The preliminary results revealed that overall students thought of the telecollaborative exchange as a valuable experience with 44% of students reporting that they have learned a lot from the experience, 67% found it to be useful for their future career as a teacher, 72% would recommend other teachers in training to participate in telecollaborative exchange and 57% though it should be included in other courses in their degree.

Discussion

These results provide support for the effectiveness of the telecollaboration for the development of digital-pedagogical competences. The results in relation to intercultural competence development were less conclusive. It is possible that intercultural development somewhat occurs in the higher education institutions where students interact with international students and learn about other cultures and therefore develop some intercultural competences. Nonetheless, the effect was larger in the telecollaborative exchange indicating the effectiveness of purposeful intervention in developing competences. The results also provided support for the importance of telecollaboration being available to the trainee-teachers during their training and not just have resources available to continuous professional development for in-service teachers that is available through platforms like eTwinning. The presentation will cover the setup of the telecollaborative exchanges, the tasks used to direct telecollaboration, the results of the study, practical applications, limitations and future research directions.

References:

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