The value of mediation for task design and implementation in a US-China virtual exchange

Carolin Fuchs¹, Bill Snyder², and Bruce Tung³

Abstract

The use of Virtual Exchange (VE) to connect Student Teachers (STs) with learners as part of their preparation is an area of growing interest (e.g., Adnan, 2017; Arnold, Ducate, Lomicka, & Lord, 2005; Dooly & Sadler, 2013; Üzüm, Akayoğlu, & Yazan, 2020). There has also been growing interest in issues of task design in VE (Arnold et al., 2005; Dooly & Sadler, 2013; Hampel, 2006, 2010; Hauck, 2010; Kurek & Müller-Hartmann, 2017; O’Dowd & Ware, 2009). This study involved US-based Teaching English for Speakers of Other Languages (TESOL) STs designing tasks for English as a Foreign Language (EFL) learners in China through the mediation of the classroom teacher in China. We explore the following questions: What is the structure of the mediation that took place during three task stages (design, implementation, and evaluation)? What is mediated by the classroom teacher in the process of task design and implementation in this VE? What factors in the design process influence the successful implementation of tasks? Data were collected from email and Google Groups posts by participants. Data analysis, supported by information from participant observer emails and instructor notes, focused on the development of teams’ tasks and feedback. Results showed three major areas of mediation by the EFL teacher: socio-institutional contexts (implementation schedule, access to technology, cultures-of-use), differences in learning purpose (genre, task selection and elements, student interests), and gaps in language proficiency. Revisions to tasks in these areas helped to localize tasks to better meet curricular demands and student interests. Timely

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mediation was essential to successful task completion. Implications for further research on task design in VE are discussed.

**Keywords:** virtual exchange; telecollaboration; teacher education; task design; mediation; localization.

1. **Introduction**

The importance of integrating VE into language teacher preparation has been a focus for quite some time now (e.g. Adnan, 2017; Arnold et al., 2005; Dooly & Sadler, 2013; Hilliker & Yol, 2022; Üzüm et al., 2020). VE is “a practice, supported by research, that consists of sustained, technology-enabled, people-to-people education programmes or activities in which constructive communication and interaction takes place between individuals or groups who are geographically separated and/or from different cultural backgrounds, with the support of educators or facilitators” (https://evolve-erasmus.eu/about-evolve/what-is-virtual-exchange/). This calls for teachers to possess a wide range of competences – pedagogical, organizational, and digital – and attitudes and beliefs (O’Dowd, 2015), and thus has implications for teacher education, including task design. For example, Develotte, Guichon, and Vincent (2010) posit that the development of semio-pedagogical skills, which they define “as the capacity to mediate a pedagogical interaction by combining or dissociating modalities (written, oral, and/or video) that are adapted to objectives and to the cognitive requisites of the task” (p. 293; see also Cappellini & Hsu, 2020; Develotte, Guichon, & Kern, 2008) must “become part of the professional repertoire of future teachers, as they will increasingly be required to exploit the multimodal potentialities of online communication in their teaching” (p. 293; see also Watanabe, 2016 on the notion of teacher repertoire). The implementation of experiential learning through VE in teacher education can help achieve this end (e.g. Fuchs, Snyder, Tung, & Han, 2017; Sadler & Dooly, 2016; Stickler, Hampel, & Emke, 2020).

With growing emphasis on localization – linking the forms of instruction to the local context of learners (Allwright, 2006; Rilling & Dantas-Whitney, 2009) –, the ability to design tasks that go beyond the generic in order to serve learner needs will be a critical component of teachers’ expanded pedagogical repertoires (Samuda, 2005). VE, through its connection of geographically dispersed learners, creates an ideal situation for teachers to explore what is involved in designing tasks for learners in a different locale. Research on task design in VE has been growing (Arnold et al., 2005; Dooly & Sadler, 2013; Hampel, 2006, 2010; Hauck, 2010; Kurek & Müller-Hartmann, 2017; O’Dowd...
While most VEs focus on direct interactions between STs in education and learners, or on connecting groups of STs, there has been little research looking at VEs connecting STs with learners through the mediation of the learners’ classroom instructor.

This case study, part of a larger multi-site project (Fuchs, Tung, & Snyder, 2022; Fuchs et al., 2017), involves TESOL STs in education in the US and tertiary EFL learners at a public university in China. The STs worked on designing tasks for the EFL learners through a VE mediated by the US Teacher Educator (TE, also Author 1), US Teaching Assistants (TAs), and the EFL teacher in China (Author 3), who also implemented the tasks. Direct contact between the STs and the EFL learners was limited to feedback provided following the completion of the tasks. We investigate the structure of the mediation that took place in the VE, what is mediated by the EFL teacher in the process of task design and implementation in the VE, and what aspects of the mediation supported successful implementation of tasks in the VE.

2. Literature review

2.1. VE in teacher education

Language teaching experts have long argued for the need to model innovative technology uses in teacher preparation (Meskill, Mossop, DiAngelo, & Pasquale, 2002; Willis, 2001). This holds true for VE in particular due to the aforementioned competencies (pedagogical, organizational, and digital competencies, as well as attitudes and beliefs – O’Dowd, 2015) and semio-pedagogical competencies (Develotte et al., 2010) required of telecollaborative teachers. A study by Marjanovic, Dooly, and Sadler (2021) has shown encouraging results regarding the willingness and ability of STs who formerly participated in telecollaboration in their teacher education studies to subsequently engage with telecollaboration in their own teaching. The study found that from a 16-year period, 54% of the 53 former students surveyed were or had been involved in using telecollaboration in their own classrooms. Similarly, another study found that mediated VE can result in reuse by the classroom teacher of a successful task design (Fuchs et al., 2017).

Yet, prior experience with technology and language teaching need to be considered. For example, Hauck, Müller-Hartmann, Rienties, and Rogaten (2020) have explored Technological Pedagogical Content Knowledge (TPACK) in a German-Polish exchange with STs and found that telecollaborative teams were ‘clearly impacted’ by “contextual ‘advantages’ and ‘disadvantages’” resulting from prior technological or pedagogical expertise (p. 23). While the Polish participants demonstrated higher digital competence from the beginning, German STs showed higher levels of pedagogical competence.
in terms of the task design requirements due to the fact that they had already taken a class on task-based language learning.

Other researchers have highlighted the importance of learners’ digital literacies and an awareness of different cultures-of-use in different contexts. For instance, studies on cultures-of-use (Thorne, 2003, 2016) have pointed to the need to consider participants’ technological socialization, i.e. if and how they have become familiar with using some technology tools but not others (Fuchs, 2019). Learners in different socio-institutional contexts may not share the same familiarity with tools. Since using technology in teaching – especially in VE projects, where learners rely on technology to communicate and collaborate with one another across a distance – adds on another layer of complexity, different tool socializations can present considerable challenges to task design.

2.2. Task design and mediation

Task design is an essential aspect of VE. In an early study, Belz and Müller-Hartmann (2003) explored how their own socialization as educators impacted task negotiation and design against the backdrop of their socio-institutional differences in the US and in Germany. Johnson's (2003) study of expertise in task design noted the lack of research on procedural aspects of task design. Samuda (2005), building on Johnson's work, suggested a strong need to look at design for implementation, as this is an area which distinguishes expert designers from novices, and about which experts are often not explicit. Others have called for technology-mediated task design (e.g. González-Lloret & Ortega, 2014; Thomas & Reinders, 2010). The meaning-making of tools and online modes needs to be emphasized (Hampel & Hauck, 2006) and explored against the backdrop of socio-institutional contexts in VEs (Hauck, 2010).

Furthermore, Dooly (2011) has called for further investigation of how learners and teachers interpret and engage with tasks (as plans and as outcomes), especially in telecollaboration. This seems to be particularly important to gain a better understanding of the learning purposes on both sides, especially in a mediated exchange such as this one, with limited contact between task designers and learners. Hampel (2010) is clear that mediation occurs not just through technology but also through the actions of people in the scaffolding of tasks.

According to Fuchs et al. (2017), VEs are “mediated learning experiences” or MLEs; intentionality and reciprocity “are the main conditions of an MLE interaction”. The specific content of the interactive process “is shaped by the intention, which is also shared with the mediatee” (Feuerstein & Feuerstein, 1991, p. 17). In a Vygotskian sense, mediation within the zone of proximal development has as its ultimate goal the support of potential or future development and is not outcome-oriented (Poehner
In this exchange, the EFL teacher and the TE were the initiated mediators, shaping the tasks for the STs and the EFL students.

Mediation through technology – and across different socio-institutional and cultural contexts – adds another layer of potential interference to shared understanding of learning purposes. The EFL learners in our study would have to interpret tasks through their own conceptual lenses to a greater degree than in VE projects in which there are fewer layers of mediation. Regarding VE as mediated practice, Brighton (2020) stresses that the cultural mediator is essential as a facilitator who guides students through the process of working with their partners in such a program (see also Fuchs et al., 2017). Yet, overall, work in this area is still limited, and the use of STs as pedagogical support through a cultural mediator with learners in VEs is what we set out to explore in the following.

Previously, we have focused on how the EFL teacher mediated the different stages in the task design, implementation, and evaluation process, and how he perceived his role (Fuchs et al., 2017). In this paper, we examine the structure of the mediation in this VE, what the EFL teacher mediated with the STs during the task design stage, and whether this mediation impacted the completion or non-completion of the tasks.

The research questions investigated are as follows.

1. What is the structure of the mediation that took place during three task stages (design, implementation, and evaluation) in this VE?
2. What is mediated by the classroom teacher in the process of task design and implementation in this VE?
3. What aspects of the mediation supported successful implementation of tasks in this VE?

3. Methods

3.1. Participants and context

This VE was part of a larger multi-site project (Fuchs et al., 2017; Fuchs et al., 2022). As seen in Table 1 below, participants in this study included 23 STs from a total of 57 in the applied linguistics and TESOL program at a private graduate institution in the US. The STs had varied amounts of teaching experience in different ESL and EFL contexts as well as different levels of comfort with technology (see Appendix A). They were enrolled in two different sections of a first-semester TESOL methods course. The purpose of this VE was to enrich the methods course by providing students with an
experiential learning experience in which they would apply some of what was covered in the course while designing a task for an authentic audience. Technology-based writing tasks were chosen as a focus because they would be relatively straightforward to implement over a distance and they most closely matched the methods course syllabus, to ensure that the STs would have some exposure to the topic. In addition, the VE would acquaint students with an authentic task design scenario in which they could employ the lesson plan template that they would later use in their practicum. Finally, it was hoped that the STs might see the potential of VE and consider employing it in their own teaching later on (Marjanovic et al., 2021).

The other group consisted of 46 EFL learners in China out of the total number of students who performed different reading and writing tasks designed by the US participants. The EFL learners were from five different cohorts of a freshmen class in the International College at a public university in China. They were enrolled in an Intercultural Communications (IC) course taught by the EFL teacher (Fuchs et al., 2022).

### Table 1. Participants

<table>
<thead>
<tr>
<th>I. STs in US</th>
<th>II. EFL Learners in China</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 23 STs (of a total of 57)</td>
<td>• 46 EFL learners (from five freshmen cohorts)</td>
</tr>
<tr>
<td>• Applied Linguistics (AL) or Teaching English to Speakers of Other Languages (TESOL) program</td>
<td>of intermediate, high-intermediate level</td>
</tr>
<tr>
<td>• First semester methods course taught by TE</td>
<td>(as determined by the university)</td>
</tr>
<tr>
<td>• Private US graduate institution</td>
<td>• IC course taught by the EFL teacher</td>
</tr>
<tr>
<td></td>
<td>• International college at a public university</td>
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</table>

This VE included some unique aspects which differentiate it from more typical VEs. While the STs in the US were designing tasks for implementation with the EFL learners in China, direct interaction between the two groups would occur only in the final stage of the VE when the STs would provide feedback on the products of the EFL and on learners’ engagement with the tasks. Thus, O’Dowd and Ware’s (2009) framework was not applied to the task stages in this VE. During the task design process, the STs in the US would interact with the EFL teacher in China who would be implementing the tasks in his course. The focus of this paper is on the mediation that took place in the task design stages because this is where key decisions were made for the subsequent stages.

### 3.2. Overview of tasks and stages

In groups of two to four, US participants in the methods course had been instructed to design, implement, and assess a technology-based reading and writing task for the EFL teacher’s learners in
China. While the STs knew that they were designing for a student population in China, the task design brief they received was otherwise generic in its specifications (see Appendix B). A writing task was chosen because it matched the methods course syllabus and would be relatively straightforward to implement in the EFL context. The focus on technology was owed to the potential of technology tools for teaching writing, e.g. blogging to foster writing fluency, and writing for a wider audience (Fuchs et al., 2022).

The timeline for the stages of the VE was as follows:

- Task design stage:
  - Two weeks for US STs to draft tasks
  - Five weeks for feedback and mediation by the EFL teacher in China
- Task implementation stage: two weeks for the EFL teacher
- Task evaluation/assessment stage: one week (direct feedback to EFL learners in China)

Table 2 below provides an overview of the tasks designed by the US STs.

<table>
<thead>
<tr>
<th>Tasks</th>
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<tbody>
<tr>
<td>1 Travel/Lonely Planet (Business Letter)</td>
</tr>
<tr>
<td>2 Campus/Neighborhood (‘Hotspots’)</td>
</tr>
<tr>
<td>3 Statement of Purpose 1</td>
</tr>
<tr>
<td>4 Museum/Exhibit [not implemented]</td>
</tr>
<tr>
<td>5 Chinese Cooking/Recipe</td>
</tr>
<tr>
<td>6 Statement of Purpose 2</td>
</tr>
<tr>
<td>7 Furniture/IKEA [not completed]</td>
</tr>
</tbody>
</table>

3.2.1. Tasks for US participants

The exchange was mediated by the design requirements provided by the STs’ instructor in the US and the EFL teacher in China. The main part of this task design for implementation required teams to negotiate their task specifications with the EFL teacher throughout the design process. Teams negotiated with the EFL teacher a short, collaborative writing task that included pre-writing, drafting, and revision stages (Brown, 2007). For the task design (Stage 1), they provided a step-by-step lesson plan for the EFL teacher, as well as a description of what they perceived the target student population and teaching context to be. Additionally, they included a rationale for choosing
a specific technology tool for the task, by making reference to the relevant literature introduced in class (Pegrum, 2009). Revisions to the draft task designs were negotiated with the EFL teacher in China, based on his feedback. After the EFL teacher implemented the tasks (Stage 2), US groups evaluated EFL learners' outcomes and provided feedback to the EFL learners (Stage 3). Based on what they had learned in this process, the STs made revision suggestions for their task in a final in-class presentation in the methods course (Fuchs et al., 2022).

Figure 1 and Figure 2 below show an example taken from the Museum Task that provides the writing focus (descriptive writing of a piece of art), the website to be used for online research (the Metropolitan Museum of Art in New York), instructions for the online research (see Figure 1), and the pre-writing task steps (Figure 2). The remainder of the writing process focuses on drafting, peer review, and revision; subsequent publication of EFL learners' final products uses Blogger. While this task fulfilled the design criteria, it ultimately could not be implemented due to internal reasons on the US side.

Figure 1. Task 4 (Museum) excerpt: online research

A Visit to the Met

New York is a city full of museums. Imagine you are visiting its most famous museum, the Metropolitan Museum of Art. You can find all kinds of artifacts here, from ancient Egyptian ruins, musical instruments to modern art!

Take a virtual tour of the museum at www.metmuseum.org
- “Enter” the museum, and then click on “Curatorial Departments” on the left to see all of the categories to choose from).

Step 1: Choosing the Art
Choose one piece of art that you find interesting. It can be a statue, artifact, painting, photograph, etc. Your assignment is to write a descriptive response to this art.
Each EFL learner cohort met once a week for 90 minutes for the EFL teacher’s IC course. Technology in the classroom was limited to a PC and a projector; internet connectivity was unavailable both in the classroom and the dormitory. Each cohort was given the option to choose their preferred task from a list of six tasks created by the US teams; two different tasks were selected by most cohorts and administered simultaneously over a period of two weeks. The EFL learners chose the tasks that best suited their interests, and completed them as in-class and homework assignments based on instructions provided by the EFL teacher or handouts prepared by the US teams (Fuchs et al., 2022).
3.3. Procedure

The data presented are from a previously unanalyzed set of data (see Fuchs et al., 2017). This exploratory case study shares characteristics of ethnography such as emic and holistic principles (van Lier, 1988) and is situated within a sociocultural framework for telecollaboration studies (Dooly & O’Dowd, 2012).

The TE (Author 1) and EFL teacher (Author 3) were participant-observers in the study (Richards, 2003). Author 2, a TE in Japan, was affiliated with the school in the US at the time. Data collection included emails and Google Group posts by Authors 1 and 3, two TAs in the US, and by US STs. Data analysis focused on the development of teams’ tasks and feedback, and was supported by information from participant observer emails and instructor notes (Fuchs et al., 2022).

3.4. Data collection and analysis

There were two rounds of coding by Authors 1 and 3 using NVivo12. Round 1 consisted of open coding of communications among the STs, their instructor and the EFL teacher about the design and implementation of the tasks (e.g. EFL teacher provides positive outline feedback and suggestions).

Round 2 focused on indicators of successful/unsuccessful mediation in direct and indirect communications (e.g. topic culturally relevant and interesting, fun project for them to work on, concern about learner interest in task, and disconnect between task and students). These data were then triangulated with the STs’ task products and the feedback to teams from the EFL teacher in China.

4. Results

4.1. Task mediation

Table 3 provides an overview of the structure of the mediation that took place during three task stages: (1) design, (2) implementation, and (3) evaluation/assessment. Direct communication refers to the STs’ communication with the EFL teacher in China, while indirect communication refers to their communication with the TE in the US and her TAs. All tasks were heavily mediated during the initial design stage through direct communication between the EFL teacher and the US participant groups.
Table 3. Tasks and mediation

<table>
<thead>
<tr>
<th>Task</th>
<th>Mediation through</th>
<th>Stages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Travel/Lonely Planet</td>
<td>direct communication (EFL teacher)</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>(Business Letter)</td>
<td>indirect communication (TE/TAs)</td>
<td>3</td>
</tr>
<tr>
<td>2 Campus Neighborhood</td>
<td>direct communication (EFL teacher)</td>
<td>1</td>
</tr>
<tr>
<td>(‘Hotspots’)</td>
<td>indirect communication (TE/TAs)</td>
<td>1</td>
</tr>
<tr>
<td>3 Statement of Purpose 1</td>
<td>direct communication (EFL teacher)</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td></td>
<td>indirect communication (TE/TAs)</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>4 Museum/Exhibit</td>
<td>direct communication (EFL teacher)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>indirect communication (TE/TAs)</td>
<td>1</td>
</tr>
<tr>
<td>5 Chinese Cooking/Recipe</td>
<td>direct communication (EFL teacher)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>indirect communication (TE/TAs)</td>
<td>1, 3</td>
</tr>
<tr>
<td>6 Statement of Purpose 2</td>
<td>direct communication (EFL teacher)</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>indirect communication (TE/TAs)</td>
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</tr>
<tr>
<td>7 Furniture/IKEA</td>
<td>direct communication (EFL teacher)</td>
<td>1, 3</td>
</tr>
<tr>
<td></td>
<td>indirect communication (TE/TAs)</td>
<td>1, 3</td>
</tr>
</tbody>
</table>

Overall, Tasks 1, 2, 3, 5, and 6 resulted in successful completion by the EFL learners in China. That is, the tasks were implemented by the EFL teacher as designed and the STs in the US were able to evaluate the outcomes and provide feedback to the EFL learners who completed the tasks in a timely fashion. Task 4 (museum) was popular with EFL learners in China but had to be implemented with a different student population in the US. Task 7 (IKEA) was originally designed for a different target student population, and the direct communication with the EFL teacher was insufficient to adjust the task to his learners’ needs and interests. Task 6 (Statement of Purpose 2) is one of the successful tasks but shows limited direct communication; however, the team noted in one of their exchanges with the EFL teacher that they had read the information the EFL teacher had already provided to members of Task 3 (Statement of Purpose 1), which is a similar task. In this way, the members of Task 6 benefited from the mediation provided to others.

In the following section, we present the different themes and sub-themes that emerged from the qualitative data: socio-institutional contexts (implementation schedule, access to technology, cultures-of-use), differences in learning purpose (genre, task design, student interests, peer review),
and gaps in language proficiency. These three main themes and their sub-themes will be discussed in more detail below, especially as they relate to Stage 1, the task design stage, where most of the mediation occurred.

4.2. Socio-institutional contexts

4.2.1. Implementation schedule

The EFL teacher in China responded to inquiries from US-based teams about the time available for tasks in class meetings and the overall calendar for implementation of the tasks they designed. The following examples illustrate the importance of laying out the schedule for the implementation on the EFL teacher’s side due to the US participants’ unfamiliarity with the context.

“I have allocated two weeks of class time and homework assignments for these projects, so both 45-minute periods can be used. Follow ups and student feedback can be done during class time in the second week” (EFL teacher, Oct 25 email, responding to Team 1).

“Student feedback should be done on the same day as the completion of the task while it’s still fresh. Midterms run from Nov 10-16, and the project dates are flexible for me anytime after Nov 16. Our new-lesson weeks begin on Wed and end on Tue” (EFL teacher, Oct 18 email, responding to Team 3).

“I have allocated two 90-minute classes for the projects. If you only need one period (45 min) in the first class, and you can complete the peer critique in a 45-minute period, then we can extend this over three weeks. If the peer critique takes longer, we might need to assign it as homework” (EFL teacher, Nov 1 email, responding to Team 6).

4.2.2. Access to technology

Equally relevant is the EFL teacher’s mediation regarding access to technology. The task design teams needed his input regarding the technology set-up in his classroom, internet access to different sites in the Chinese context, and what tools could be effectively used in his context.

“guggenheim.org appears to be blocked or partially blocked, so accessing the online exhibits is difficult. You may want to use the Metropolitan Museum site instead. I have no trouble with accessing metmuseum.org exhibits” (EFL teacher, Oct 18 email, responding to Team 4).
“My main concern is to do the introduction and presenting the task without having access to the website in class. Remember there’s no internet connection in our classroom” (EFL teacher, Nov 24 email responding to Team 4).

“Every classroom has a computer with a project[or], so Powerpoint presentations with video and/or screenshots can and should be used” (EFL teacher, Oct 25 email, responding to Team 1).

4.2.3. Cultures-of-use

A concept related to technology access is the concept of cultures-of-use. The EFL teacher sometimes needed to explain why one task design choice might be preferred over another based on the technology of choice. He tied this feedback in particular to the EFL learners’ familiarity with and use of specific tools, sometimes recommending including training in the task design for tools which might be new to the EFL learners.

The EFL teacher also provided information about which websites were blocked in China, sometimes suggesting the use of Chinese alternatives to resources that the STs proposed because they were more familiar or accessible. He also would communicate information to the TE for general dissemination to all teams.

“You’re already aware that most of the students are tech savvy as potential IT or telecommunication majors. All of them use QQ, which is the all-in-one Chinese equivalent of combining Yahoo or MSN with Skype and Facebook (email, IM, voice and video chat, personal space, etc.)” (EFL teacher, Oct 18 email, responding to Team 2).

“My students should be familiar with blogs, but not with Blogger, so we may need to include training for it as part of the process” (EFL teacher, Oct 18 email, responding to Team 4).

“1. There are no problems accessing any of the US university websites that I know of. 2. Since Google left China, there have been some issues accessing Google’s services – such as Blogger’s main site. Both Gmail and Google’s search engine are both available through servers in Hong Kong, but not every Google App is accessible (for example, Google Docs seems to be blocked). I can have the students sign up for Gmail accounts next week to avoid last minute problems. As an alternative to Google Docs, they can use QQ’s personal space which they’re all familiar with” (EFL teacher, Oct 21 email to Team 6).
The EFL teacher welcomed the use of the blog tool but also noted that Blogger was blocked in China. Alternatively, his students would be able to use a Chinese version of the tool. He had tried out the sign-up process and thought it would be easy to use for his students.

“The students won't need to sign up for a gmail account first, so it shouldn’t be a problem for them” (EFL teacher, Oct 20 email to TE).

These examples highlight how questions of access to technology and cultures-of-use are interrelated.

4.3. Differences in learning purpose

Another theme that became evident in the data was differences in learning purpose. For example, the STs’ purpose was to design a writing task that made use of technology. The EFL teacher’s purpose was to fulfill curricular goals for his course. These different purposes impacted considerations of genre, task selection and elements, student interest, and the use of peer review. This meant that the EFL teacher often needed to clarify his purposes for the STs.

4.3.1. Genre

In the example below, the EFL teacher provided feedback to the STs about whether the written genres proposed by the STs would be relevant to the EFL learners. He further stressed which aspects of genre structure would need to be emphasized in their designs because writing was not a primary focus of his course.

“I believe writing a personal statement for a university application could be interesting and relevant for many of my students, since some of them have expressed interest in studying abroad after graduation” (EFL teacher, Oct 18 email to Team 3).

“For the assessment portion, we may need to provide guidelines as to what constitutes a clear introduction, body, and conclusion since technically I’m not teaching a writing class. The project fits well for the overall course – intercultural communication” (EFL teacher, Oct 18 email to Team 4).

4.3.2. Task selection and elements

The EFL teacher also provided feedback to the STs regarding task design. When the STs offered alternative task designs, he expressed his preferences in terms of how the tasks matched with the
EFL learners’ experience and the focus of the curriculum. He also would request greater detail in task designs from the STs in order to better connect the task to his students.

“It seems to be a more fun project for them to work on, especially in the first semester while they’re still exploring the campus neighborhood themselves. The second option may be more suited as a second semester project, or for a listening/speaking course where learning presentation skills is essential” (EFL teacher, Oct 19 email to Team 2).

“Writing a full [Statement of Purpose] to their school of choice seems to be more meaningful. Would you want them to choose their schools practically (schools that they actually intend to apply to and/or have the best chance of attending) or ideally (their dream schools)?” (EFL teacher, Oct 21 email to Team 6).

We also found differences in learning purpose regarding peer review in Stage 1 that reflected both of these aspects of the process. In his feedback for Task 3 (Statement of Purpose 1), the EFL teacher responded directly to the team’s request for feedback regarding peer correction and the fact that it was not an established practice in the Chinese context. The EFL teacher was interested in including peer review because he felt it was going to be a good opportunity to practice for his students. This may reflect his prior experience as a student in the US-based teacher education program.

4.3.3. **Student interest**

An important concern for the EFL teacher was how the tasks connected to the EFL learners and their lives. He encouraged aspects of task design that he felt would increase student interest and enjoyment in completing the task, and which provided the EFL learners with a product they could value.

“As you suggested, if we’re able to convince the school to link our project pages to the international college’s website, then it would give the students an even greater and lasting sense of accomplishment. Regardless, the fact that they’d be able to show their pages to their friends and families would be an added incentive to do well” (EFL teacher, Oct 19 email to Team 2).

“There are still details [that] need to be filled in, but the overall task is interesting and relevant to our cultural topics and should be fun to implement. I look forward to your final lesson plan and student packets” (EFL teacher, Nov 8 email to Team 4).
In the case of unmediated task design, when Task 7 (IKEA) was reassigned to his EFL learners, the EFL teacher explained in his initial reply to the IKEA team members that the task design did not meet his learning purpose (e.g. Bueno-Alastuey & Kleban, 2016) or target his student population. As a result, he was unable to implement the task.

“Thank you for your outline and lesson plan. Unfortunately, I already have more tasks than available classes. At this point, I can only accommodate those tasks originally designed with my student population in mind, so I apologize that I won’t be able to add your group’s task to the list. I believe your task can be successfully implemented in your class without difficulties” (EFL teacher, Nov 9 email to Team 7).

4.4. Gaps in language proficiency

Lastly, the following is an example from the mediation of Task 7 regarding gaps in language proficiency as assumed by the STs and as judged by the EFL teacher. When the task was reassigned to his students, the EFL teacher realized the mismatch of his students’ proficiency levels based on the task description.

“This task is probably best suited for Advanced English language learners” (Task 7 members, Oct 15 email to TE).

Despite his attempts to mediate the design of the IKEA task, the task was already too far along in the design process for substantial modification. The difference in the original target learner population (an advanced group of Japanese EFL learners) in combination with issues regarding the technology tools (inaccessibility of the IKEA website in the classroom) and student interest (unfamiliarity with IKEA) ultimately could not be rectified in time for implementation.

5. Discussion

We have previously explored how the EFL teacher acted as the mediator in the different project stages of this VE and how he perceived his role (Fuchs et al., 2017). Against the backdrop of providing an experiential learning experience for language STs, our focus in this paper is on the following questions.

• What is the structure of the mediation that took place during three task stages (design, implementation, and evaluation) in this VE?
• What is mediated by the classroom teacher in the process of task design and implementation in this VE?
• What factors in the design process influence the successful implementation of tasks in this VE?

5.1. The structure of the mediation

The timeline for this VE as planned had three stages: task design, task implementation, and task evaluation/assessment. While mediation occurred though all three stages, as shown in Table 3 above, the primary locus of mediation was the task design stage. All of the tasks required some mediation at this stage, and the EFL teacher was the primary source of that mediation.

That the task design stage was heavily mediated is in some ways unsurprising. The greatest amount of time in the VE was allocated for it in the expectation that initial task designs would need to be revised. The generic nature of the initial task brief (Appendix A) provided freedom (Johnson, 2003) for the STs to pursue different types of tasks that could meet the requirements of the brief. These would need revision in order to be implemented in the EFL teacher's context.

The EFL teacher’s central role in the development and implementation of the tasks is a confirmation of Hampel’s (2010) point that the human aspect of mediation can be as significant as the technological. In the process of moving the STs’ task designs from plans to use in actual lessons, the mediator’s role was crucial to the success of implementation in this VE. This reality highlights the nature of VE as a mediated learning experience in which participants are guided intentionally and specifically by cultural mediators to achieve learning objectives (see Fuchs et al., 2017).

5.2. What the EFL teacher mediated

Our second research question asked: what is mediated by the EFL teacher in the process of task design and implementation in this VE?

We identified three major themes and sub-themes as they relate to task completion in the task design stage: socio-institutional contexts (implementation schedule, technology accessibility, cultures-of-use), differences in learning purpose (genre, task elements and selection, student interests), and gaps in language proficiency. These results expand the perspective on what is mediated beyond technology, which has generally been the focus of previous studies of mediation in VE (Nicolau, 2021).
It is evident that other aspects of task design for implementation in this VE required a large amount of mediation, especially in light of the different socio-institutional contexts. What unifies all of these topics is how the mediation provided the STs with another perspective on their efforts to fulfill the task design brief and produce tasks that could be successfully implemented. These findings highlight the importance of localization in task design and the role of the EFL teacher in this VE as cultural mediator.

The task design brief provided to the STs was generic, charging them with producing a writing task which included a technology component. The STs' initial responses to this charge did attempt to include some consideration of context as provided in the brief but the amount and types of mediation provided in the EFL teacher's responses to their tasks make clear how unfamiliar the context was to the STs despite the fact that five were originally from China, and some of them had teaching experience in the context. The STs' approaches to their tasks were grounded in uninformed understandings of what the EFL students might be interested in, and how the tasks could be accomplished, but as Allwright (2006) points out, classroom teaching is complex, and requires local solutions to the problems involved in it. The mediation provided by the EFL teacher helped the STs revise their tasks to better match the curricular context and student interests, and to employ the technological resources available in China rather than try to engage students with irrelevant tasks and unfamiliar tools. This experience could help STs gain greater awareness of the importance of localization in task design and what aspects of a task they need to give attention to in the process of localization (Samuda, 2005).

An important aspect of the EFL teacher's mediation of design was how he brought the learner perspective on tasks to the STs. From speaking about what technology the learners had available to what their interests were, the EFL teacher gave the STs a window into the people they were designing for that otherwise might not have been accessible, and ensured the completion of the tasks they designed. This supports Brighton's (2020) argument for the importance of cultural mediators in VE. For STs, gaining such insights into the learners they are designing for can help them in taking the learner's perspective, which is an important component of autonomy-supportive teaching (Reeve, 2016).

5.3. What mediation aspects supported successful implementation

Our third research question investigated: what aspects of the mediation supported successful implementation of tasks?

Findings indicate that mediation yielded five tasks which could be implemented with the EFL learners in China, including the provision of feedback by the US STs. One task (IKEA), initially designed for
different learning contexts, was unmediated and incomplete due to insufficient time for feedback and revision. Another task (Museum) was mediated and ready for implementation but had to be implemented with a different US-based student population.

As Luo and Gui (2019) have found in their Chinese-US telecollaboration, “target language proficiency gap or insufficient Chinese proficiency was an acute problem for telecollaboration in the Chinese context” (p. 21). Likewise, in our study, the gaps between the expected and actual proficiency levels of the EFL learners became most salient in the IKEA task (see also Fuchs et al., 2022). While a needs analysis had been conducted with the STs, the gap in learner language proficiency underlines the above call for conducting needs analyses with all participants (Krystalli, Panagiotidis, & Arvanitis, 2020). As González-Lloret and Ortega (2014) remind us, conducting a needs analysis is imperative for being learner-centered or for determining “learner fit” (Chapelle, 2001, p. 55).

We agree that foregrounding the technological tools and access to those tools is as critical for task realization (González-Lloret, 2014) as is the exploration of participants’ tool socializations and cultures-of-use (Fuchs, 2019), especially in a VE with divergent contexts such as the present one. This may support Hampel’s (2006) division of pre-implementation task design stages into two, with the first one, approach, specifically focused on technology selection.

6. Conclusion

We have presented here a VE involving US-based STs designing writing tasks for EFL learners in China through the mediation of their classroom teacher. The results of this study show that mediated virtual exchanges between STs and language learners involving the STs designing tasks for implementation can result in successful task completion by learners. Timely mediation was required in a large number of areas relating to the socio-institutional contexts, learning purposes, and learner language proficiency. Where mediation did not occur or was delayed, tasks could not be implemented or were incomplete. As we have discussed elsewhere (Fuchs et al., 2022), time constraints were a decisive factor on both ends. For instance, the first half of the semester for the US-based students was spent on another VE with in-service teachers in South Africa and Cyprus, which reduced the time available for this VE and thus for the EFL teacher’s mediation and implementation of the tasks.

The aspects of the task design that were mediated supported the localization of tasks to better match the curricular context and student interests. This kind of mediated task design process in
VE could promote greater awareness of components of task design in STs and help them develop greater expertise in task design as part of their pedagogical skills (Samuda, 2005).

While any VE requires extensive mediation on the part of the educators (e.g. Belz & Müller-Hartmann, 2003), this becomes even more important in a VE such as this one, where STs design tasks for implementation through the mediation of a classroom instructor. Participants need to be cognizant of the role of mediation, and educators and STs alike need to think about their audience within context. This involves, for instance, an awareness of one’s own socialization and that of the learners (Belz & Müller-Hartmann, 2003; Ribeiro, Cunha, Silva, & Chorau, 2021) and the learners’ language levels (Chism & Graff, 2020; Krystalli et al., 2020).

In addition, the research on task design that began with Johnson (2003) and Samuda (2005) has found a rich area of growth in the concerns of VE researchers (Arnold et al., 2005; Dooly & Sadler, 2013; Hampel, 2006, 2010; Hauck, 2010; Kurek & Müller-Hartmann, 2017; O’Dowd & Ware, 2009). However, this area remains one with contested results and deserves further focus in order to clarify many issues in the design of VE. In particular, the question of task design for implementation, the connection between tasks-as-workplan (the intentions and expectations of the task) and tasks-as-process (what actually happens when the task is carried out) (Dooly, 2011), and the place of mediation in that connection remains open across the many variations of VE that exist.

In future research, it would also be worth exploring how the STs engaged with the role of task designer in this exchange and how this was affected by mediation. Such research would contribute to understanding how VE can help STs expand their teaching repertoire (Watanabe, 2016) and develop the semio-pedagogical skills needed for multimodal contexts (Develotte et al., 2010).

References


Fuchs, C., Snyder, B., Tung, B., & Han, Y. (2017). The multiple roles of the task design mediator in telecollaboration. *ReCALL, 29*(3), 239-256. https://doi.org/10.1017/S0958344017000088


## Appendix A

### Student Teachers’ Prior Teaching and Technology Experience

<table>
<thead>
<tr>
<th>Team</th>
<th>Team composition (self-selected)</th>
<th>Teaching Experience Range</th>
<th>Technology Experience Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team 1 (4 STs)</td>
<td>Japanese</td>
<td>4 years teaching experience</td>
<td>Internet search</td>
</tr>
<tr>
<td></td>
<td>Chinese</td>
<td>Some tutoring experience</td>
<td>Internet search; PowerPoint</td>
</tr>
<tr>
<td></td>
<td>Chinese</td>
<td>TA (Chinese) and internship experience</td>
<td>Photoshop; PowerPoint</td>
</tr>
<tr>
<td></td>
<td>Canadian</td>
<td>5 years tutoring experience</td>
<td>CourseWeb; Google Groups; blogs</td>
</tr>
<tr>
<td>Team 2 (3 STs)</td>
<td>Korean</td>
<td>ESL teaching during MA in US</td>
<td>PowerPoint, Photoshop, Excel</td>
</tr>
<tr>
<td></td>
<td>Korean</td>
<td>Writing Center tutor during MA in Korea</td>
<td>MS Office User Specialist Certificates: Word/Excel/PowerPoint; Photoshop</td>
</tr>
<tr>
<td></td>
<td>American</td>
<td>Informal tutoring experience</td>
<td>Not specified: “I'm pretty good with high-tech things”</td>
</tr>
<tr>
<td>Team 3 (3 STs)</td>
<td>Canadian</td>
<td>7 years EFL teaching in Korea</td>
<td>MS Office (Word/Excel/PowerPoint), email, Internet search; Skype</td>
</tr>
<tr>
<td></td>
<td>Chinese</td>
<td>Tutoring experience</td>
<td>Internet search; email, MS Office (Word/PowerPoint/Excel)</td>
</tr>
<tr>
<td></td>
<td>Chinese</td>
<td>2 years online tutoring experience</td>
<td>Skype</td>
</tr>
<tr>
<td>Team 4 (2 STs)</td>
<td>American</td>
<td>ESL teacher for cruise ship line</td>
<td>“Smart classroom”; YouTube;</td>
</tr>
<tr>
<td>Team</td>
<td>Language 1</td>
<td>Language 2</td>
<td>Experience</td>
</tr>
<tr>
<td>------</td>
<td>-------------------------</td>
<td>-------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>5</td>
<td>Mexican-American</td>
<td>Informal tutoring</td>
<td>Technology for presentations</td>
</tr>
<tr>
<td></td>
<td>Taiwanese</td>
<td>6 months TA + 2 years Jr. High School teaching experience in Taiwan</td>
<td>Google, MS Office, Skype, Facebook;</td>
</tr>
<tr>
<td></td>
<td>Chinese</td>
<td>TA experience in China</td>
<td>PowerPoint, blogs</td>
</tr>
<tr>
<td></td>
<td>American</td>
<td>Informal tutoring</td>
<td>MS Office</td>
</tr>
<tr>
<td></td>
<td>American</td>
<td>2 years teaching EFL in China</td>
<td>PowerPoint</td>
</tr>
<tr>
<td>6</td>
<td>Taiwanese</td>
<td>4 years part-time teaching in Taiwan;</td>
<td>Computer lab as a student</td>
</tr>
<tr>
<td></td>
<td>Korean-American</td>
<td>8 years teaching EFL in Korea</td>
<td>Internet search</td>
</tr>
<tr>
<td></td>
<td>Korean</td>
<td>No teaching experience</td>
<td>Blackboard</td>
</tr>
<tr>
<td>7</td>
<td>Japanese</td>
<td>3 years part-time cram school experience; elementary school (5th &amp; 6th grades) experience in Japan; tutoring + CBI experience; conversation partner + 2 years ALT on JET</td>
<td>AV use as a student</td>
</tr>
<tr>
<td></td>
<td>American</td>
<td>1 year tutoring experience in USA; 2 years CBI (Business) teaching experience in China</td>
<td>Undergrad computer science degree</td>
</tr>
<tr>
<td></td>
<td>Japanese-American</td>
<td>Conversation tutoring experience; 2 years experience as an ALT on the JET program in Japan</td>
<td>E-mail; computer lab programs in school in Japan</td>
</tr>
</tbody>
</table>
Appendix B

Technology-Based Reading and Writing Task

In groups, you will design a technology-based reading and writing task (30% of your final grade) for either a) a target student population of your choice (adults/children/ESL/EFL etc.) or for b) a group of EFL students at a language school in China.

In this task, you will focus on using technology to enhance the development of specific skills, namely reading and writing and multiliteracy skills, by designing a collaborative reading and writing task (see Brown, chapters 12, 20, 21, and the Pegrum article). In groups, you will develop a writing task for EFL learners in China who are then going to execute the class in their respective English courses. EFL participants will be 5 classes (Intercultural Communication, a freshmen class) that meet once a week, with about 18 students per class, i.e., about 90 students total. The teacher of the courses in China is [Author 3, a part-time student in our program]. Students range from Intermediate to Advanced, with the majority in the Advanced-Intermediate category for speaking and in the Advanced for reading and writing skills. Since learners do not have Internet access in the classrooms, these tasks will have to be assigned as homework. Freshmen are not allowed computers in their dorm rooms, but they have access in the libraries and Internet cafes. The minimum is a one-week turn-around.

Your group may also choose a different target student population if you are currently teaching in [the local ESL program], for example. For an ESL target student population, you may want to choose cultural topics or current events that fit within your theme-based curriculum. In the case of choosing a different target student group, you will either implement the task in one of the [local ESL program] classes OR swap tasks with another group and will execute each other’s respective reading and writing tasks. You will then grade the task and make revisions for how to change the task in the future for the same or another student population (or adapt the task for different purposes).

You will present this task to your classmates at the end of the semester (including the revisions based on the feedback from the students for option b). In your final presentation, your group will also reflect in class on the success of the task you gave to your target student population of choice. Presentations should not exceed 25 minutes including a short Q&A.

Additionally, you will provide your classmates with peer feedback on their in-class presentations and their final task. I will provide you with specific guidelines for this technology-based task, the peer feedback, and the grading rubric in due time.

Here are the steps I would like for you to follow – your task description should not exceed one page and should relate to the respective literature on reading, writing, and technology.
1. Review chapters Brown, chapters 12, 20, 21, and the Pegrum article (Technology; Teaching Reading & Teaching Writing; Multiliteracy Skills).

2. In your group, choose one topic related to intercultural learning and the implications for language teaching for a collaborative writing task for an EFL class in China (or a different target student population – to be discussed with me beforehand).

3. Choose one technology tool that you see best suits your needs.

4. Provide a one-page rationale for the technology-based task based on the chapters in Brown and Pegrum. Include the following: Description of target student population and teaching context (EFL/ESL, students’ language level, course content/theme, etc.), reason for technology tool choice.

5. Design a short collaborative writing task which includes a pre-writing, drafting, and revision stage (see pp. 404-410 in Brown). This task will be completed by your designated learner population.

6. Be sure to provide a concise description of the steps and the page limit for this task. The final product of the writing task should not exceed 1,000 words.

7. Include a short assessment component for the writing task (see pp. 413-414 in Brown) detailing how you would weigh the different components.

Due date for outline of task: Oct 26 (for Tues section); Nov 1 (for Mon section)
Due date for task administration to learners: Nov 19 (for Tues section); Nov 26 (for Mon section)
Due date for final task and presentation: Dec 7 (for Tues section); Dec 13 (for Mon section)