

# Teachers' interaction in combined physical and virtual learning environments: A case study of tandem language learning and teaching in Finland

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*The development of the Internet and digital tools for interaction has enabled computer-mediated communication as part of the communicative approach to language learning and teaching. This creates affordances for learners of any target language from any location to communicate with each other, for example, through tandem language learning – that is, reciprocal two-way learning in dyads of two students with different first languages. Previous studies on tandem learning have mainly focused on the interaction between tandem partners in informal learning situations. In this study, we explore the teacher's role in virtual classroom tandem applied to curriculum-based language teaching. The aim is to describe teachers' engagement in interactional situations in the classroom, including the interplay between the physical classroom and virtual learning environments (VLEs). The data comprise video and screen recordings of teacher activities and interactions. The results reveal that virtual classroom tandem is a strongly student-centred approach where the teacher interaction during tandem lessons is notably narrower compared with tandem language learning based entirely on face-to-face meetings in a formal school context and in classroom instruction generally.*

*Keywords:* classroom interaction, tandem language learning, teacher's interaction, virtual learning environment

## 1 Introduction

Digitalisation is among the topical themes in the education field. Collaborative and distributed activities and participation, alongside social relationships and digital communities online, have changed how, when, and where people interact with each other in their everyday lives (Greenhow et al., 2009; Healey, 2016). This also creates new possibilities for interactions among students and between students and teachers both within and outside the schools, and requires reconceptualisation of teaching practices as the learning context is unrestricted to the physical classroom but can occur in digital learning environments and worldwide interactions. Online interaction has enabled (synchronous) computer-

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mediated communication to be applied as part of a communicative approach towards language learning and teaching, hence enabling learners anywhere to access practically any target language (Elstermann, 2016; O'Rourke, 2007). This implies that cross-linguistic cooperation and the possibility of everyday contact with other languages is nowadays independent of whether an individual resides in a multilingual area.

In language teaching, an emphasis on students' interactions both within and outside language classrooms entails a focus on students as active language users in authentic learning situations. However, limited research exists on the changes that this increased peer learning entails regarding language teachers' role in formal school contexts. Authentic language use and building bridges between language groups is also explicitly mentioned in the national core curriculum in (second national) language teaching in Finland (EDUFI, 2016a, 2016b). Following this, both physical and virtual forms of tandem language learning have been initiated within curriculum-based language teaching (Hansell & Pörn, 2016; Pörn & Hansell, 2019; Hansell et al., 2020).

Tandem language learning entails interactive learning through reciprocal two-way learning in dyads of two students with different first languages (Karjalainen et al., 2013; O'Rourke, 2007). Thus, in tandem, both languages are seen as equally important and should be given equal attention regarding both time and attention (Pörn & Hansell, 2020). Tandem implies student-centred language learning and builds on a socio-interactional perspective of learning, which entails an emphasis on learning and interaction as social processes situated in contexts in which the participants engage in mutual social actions (cf. Mondada & Pekarek Doehler, 2004). Accordingly, language use is viewed as providing opportunities for language learning, with language learning occurring in social interactions (Pekarek Doehler, 2010; Enfield & Levinson, 2006; Seedhouse & Walsh, 2010). Implementing tandem language learning in formal language teaching in a school context requires a focus not only on the students' reciprocal peer interaction and learning processes but also on the teacher's role in tandem language learning and teaching. Tandem learning in a school context can be organised through different integration grades of the tandem dyads' cooperation in the syllabus and language courses (cf. Elstermann, 2016). This study focuses on virtual tandem cooperation within formal language teaching in Finnish general upper -secondary education during language lessons in the second national language Finnish or Swedish.

This study aims to explore the teacher's role in virtual classroom tandem. We describe teachers' engagement in interactional situations in the classroom, including the interplay between the physical classroom and virtual learning environments (VLEs). Two research questions guided the analysis:

- 1) What interactional situations do teachers engage in during tandem language lessons in both physical and VLEs, and to what extent?
- 2) What aspects of student-centred tandem language learning require the teacher's interaction with individual students?

## **2 The teacher's role in (tandem) language learning and teaching**

Tandem language learning has previously been organised mainly outside curriculum-based language education. In tandem research, focus has been mainly on peer interaction between partners in a tandem dyad, that is, L2-L1 interaction,

usually among adult learners or university students (Bower & Kawaguchi, 2011; Elstermann, 2016; Karjalainen, 2011; Tian & Wang, 2010). Even when integrated into institutional language courses, tandem learning has mostly been applied as an individual activity (O'Rourke, 2007). Thus, the teacher's role has usually been viewed as minimal (O'Dowd, 2013), stressing the autonomy of tandem dyads. For contexts where tandem learning is integrated into the language lessons, the teacher is one interaction partner (Karjalainen et al., 2013) and has a more critical role than in individual tandem (Hansell et al., 2020; Pörn & Hansell, 2020). Thus, this chapter focuses on the teacher's role in tandem language learning and teaching in a formal school context.

## 2.1 Tandem language learning and teaching in the (virtual) school context

Since the 1960s, tandem learning has been developed for different target groups, contexts, and learning environments (Bechtel, 2003; Elstermann, 2016). Tandem language learning can be arranged as part of formal language studies with variation in the level of teacher steering, or as informal activities between tandem partners that occur in face-to-face interactions or through written or oral virtual contact. Originally, the foundation of tandem learning lies in face-to-face tandem arranged either as intensive courses and exchange visits internationally or as more extensive (national) cooperation in bilingual areas. In the 21st century, virtual tandem – called, for example, *eTandem*, *online tandem*, or *teletandem* (Elstermann, 2016; Helm & Guth, 2016; O'Rourke, 2007; Telles, 2015) – have been established adding to face-to-face tandem.

Tandem language learning entails reciprocal two-way learning between two individuals with different first languages and is based on the principles of reciprocity and autonomy and the concept of authenticity (Karjalainen et al., 2013; O'Rourke, 2007; Pörn & Hansell, 2019). *Reciprocity* implies that students switch languages, dividing time equally between them and, thus, being the learner of their respective L2 and a resource in their respective L1 (Karjalainen et al., 2013). Simultaneously, they develop *learner autonomy*, that is, the capacity to plan, monitor, steer, and evaluate their own learning (Karjalainen et al., 2013; Holec, 1981; Little, 2007). *Authenticity* entails that the goal in tandem cooperation is to engage partners in a tandem dyad in interactions where they share thoughts and meanings rather than focusing on merely practising linguistic forms (Karjalainen, 2011; Elo & Pörn, 2018). Although the goal of tandem cooperation for both partners is to learn their target languages, a dual focus exists entailing content and language; that is, language-related aspects are topicalised parallel to discussions of the content in question (Elstermann, 2016; Karjalainen, 2011; Rost-Roth, 1995).

As technological development has increased the possibilities for smooth communication between individuals separated by wide geographical distances, it has also enabled a shift in virtual tandem from asynchronous, written communication via email to quasi-synchronous contact through, for example, MOOs (multiuser domain, object oriented) and chats, and, more recently, to synchronous oral interactions using video conference tools and instant-messaging programmes resembling interactions in a face-to-face-tandem (Bower & Kawaguchi, 2011; Elstermann, 2016; Kötter, 2002; O'Rourke, 2007; Telles, 2015; Tian & Wang, 2010). Both asynchronous and synchronous, alongside virtual and face-to-face, tandems have been applied mainly at the university level or as individual tandems for adult learners (Apfelbaum, 1993; Bechtel, 2003; Bower & Kawaguchi, 2011; Elstermann, 2016; Karjalainen, 2011; Rost-Roth, 1995; Schmelter,

2004; Telles, 2015; Tian & Wang, 2010). Tandem language learning has also been developed for younger target groups, that is, in primary and secondary education (Elstermann, 2016; Holstein & Oomen-Welke, 2006; Pörn & Hansell, 2019). Applying tandem learning in a formal school context and for younger learners has implications for tandem partners' autonomy because it includes a more central role for the teacher facilitating the students' learning processes (Pörn & Hansell, 2020).

## 2.2 *The teacher's role in (tandem) language teaching*

The change in the view on learning and teaching during the past few decades has led to less emphasis and time for whole-class teaching and more focus on student-centred, task-oriented (group) activities in which students are regarded as autonomous and active participants in interaction (Gardner, 2013; Hargreaves, 2004; Nuthall, 2005; Sahlström, 2017). The socio-interactional perspective on language learning and teaching emphasises learner activity and participation, creating a student-centred approach where the teachers act as facilitators and students engage in peer learning (Maor, 2003). This has induced increased time for students to talk and interact with each other, that is, peer interaction. Peer interaction differs from teacher-prompted talk (Musumeci, 1996; Basturkmen, 2002) and from producing responses in teacher-initiated initiation-response-feedback (IRF) sequences (Sinclair & Coulthard, 1975, 1992; Sahlström, 2008). It challenges learners to become more independent interlocutors, that is, to exceed the 'response' mode and engage with the interlocutor rather than perform for the class (Wang, 2002). Accordingly, the teacher's role has shifted from an information dispenser and centralised authority to a decentralised facilitator and coach (Cifuentes, 1997; Wang, 2002).

The facilitator role is also identified for teachers in physical and virtual classroom tandem contexts (Hansell et al., 2020; Pörn & Hansell, 2020). The tandem teacher is responsible for the overall planning and arrangement of classroom activities while considering the goals set for learning and teaching, for example, as they dovetail with the national core curriculum, assessing students' learning progress (Pörn & Hansell, 2020). Besides the facilitator role, Pörn and Hansell (2020) identified two other roles for tandem teachers: language expert and coach. Because tandem learning is organised within language teaching, one dimension of the teacher's role relates to language as a school subject: the teacher is an expert in both the target language and language learning (Pörn & Hansell, 2020). In tandem language learning, the teacher is needed as a language expert to help students compare and contrast the target language and the language of instruction, for example, in situations where tandem partners lack knowledge in their respective L2s (cf. Karjalainen et al., 2015). In tandem learning, all learners have their L1 'experts' – that is, their tandem partners – as models and support. However, they are not professional language teachers; the L1 partner is fluent, for example, in practical use of their L1, including grammar, but cannot be expected to explain or teach grammatical rules (Bechtel, 2003; Karjalainen, 2011; Karjalainen et al., 2013). As a language expert, the teacher is able to explain grammar and other language aspects in detail and to contrast the target language with the language of instruction (Hansell et al., 2020; Pörn & Hansell, 2020).

Furthermore, a dimension of the teacher's role central in tandem learning is the teacher as a coach (Pörn & Hansell, 2020). This entails supporting students in their reciprocal cooperation and progress towards becoming autonomous learners.

Furthermore, the teacher guides students in their roles as language learners (L2) and language models and supports (L1). With L2, this means learning how to use their tandem partner as a resource, and with L1, it means learning how to use their L1 knowledge to support their tandem partner's learning. Particularly during the introductory phase of tandem learning, students lack experience in how to cooperate and support each other. Coaching also includes supporting students in the dual focus on content and language by stimulating metalinguistic discussions (Pörn & Hansell, 2020). The coach role seems to vary most between face-to-face and virtual classroom tandem models. In face-to-face tandem, teachers' coaching usually includes both partners in a tandem dyad (Pörn & Hansell, 2020), while in virtual tandem, coaching discussions occur mainly outside the actual tandem conversations between the tandem partners (Hansell et al., 2020).

### 3 Educational context

This study explores the teacher's role in virtual tandem language learning within the Finnish educational context of formal language teaching. Finland is by legislation a bilingual country with two national languages: Finnish and Swedish. Although Finnish is the registered mother tongue of most of the population, at 87.3%, with Swedish in the minority at 5.2% (OSF, 2020), both national language groups constitutionally have equal rights to use and obtain services in their mother tongues in society, including education (Boyd & Palviainen, 2015). According to current legislation, the nation's educational system is organised separately for both language groups in parallel monolingual tracks with different languages of instruction and administration from early childhood education and care (ECEC) to upper secondary school.

Both language groups study the other national language as an obligatory school subject – Swedish as the second national language in Finnish-medium schools and Finnish as the second national language in Swedish-medium schools (Boyd & Palviainen, 2015; Nuolijärvi, 2013) – but Finnish is usually introduced earlier in the Swedish-medium schools than Swedish in the Finnish-medium schools. The compulsory studies in the second national language have been regularly questioned in societal debates for half a century, especially regarding the numeric minority language Swedish (Boyd & Palviainen, 2015; Hult & Pietikäinen, 2014). Recently, there has also been a discussion about and a call for more contact and cooperation between the language groups within the educational system in Finland (Boyd & Palviainen, 2015). Tandem is a model for increasing cooperation between language groups and schools so that both languages have equal status as target languages (Pörn & Hansell, 2019; 2020).

Tandem language learning in a school context entails cooperation between students, teachers, and language groups, and thus, separate schools with different languages of instruction (cf. Pörn & Hansell, 2019). In the physical classroom tandem model (Karjalainen et al., 2013; Pörn & Hansell, 2020), the teachers teach their subjects (Finnish and Swedish) in their respective classrooms in mixed language groups, and the tandem dyads participate in turns in both target language lessons together. In the virtual classroom tandem – this study's context – the students are always physically in their respective schools and classes, with their own teachers. This entails that all students and teachers participate in all lessons, staying physically in their schools but cooperating with each other in the VLE. Thus, the teachers are also present in lessons, focusing on the other language;

that is, the Finnish language teacher attends the Swedish language lessons and vice versa. Although the teachers are mainly responsible for the activities and tasks focusing on their respective language subjects, they never instruct the whole group, with one half present in the physical classroom and the other half in the VLE (i.e., hybrid teaching, see e.g. Raes et al., 2020). Instead, the students always receive whole-class instructions from the teacher in their school, regardless of the lesson's target language. For the students, this means that they mostly have contact with their own teacher, and the contact with the other language group in the VLE is mediated by the video calls with their tandem partners.

Tandem lessons in the partner schools were implemented as a part of compulsory courses in Swedish and Finnish, respectively, as the second national language in grades two to three in general upper secondary school (ages 17–18), following the national core curriculum regarding the course theme. Course thematic in our data include, for example, culture, media, society, education, and working life. The schools are located 400 kilometres between them: the Swedish-medium school in a Swedish-majority municipality on the bilingual west coast and the Finnish-medium school in a monolingual Finnish municipality in the eastern part of the country. Thus, the only way for schools to continuously cooperate is through a VLE. Tandem learning was integrated into two to six sequences of 40-minute sessions per course, while the upper secondary school courses, on average, comprise 38 lessons of 45 minutes. The partner schools in this study followed different periodical systems of six and eight weeks, respectively. To enable more extensive tandem cooperation between tandem dyads, the teachers planned tandem cooperation to continue during different courses and periods so that the students would work with the same tandem partner, usually for a sequence of eight to ten lessons. Students in the Swedish-medium school had studied Finnish starting from grade three (age nine) in primary school, while students in the Finnish-medium school had studied Swedish starting from grade seven (age 13).

In this study, the VLE comprised a learning platform that functioned as a compilation for all materials and links, where video call channels and shared documents for each tandem dyad were also linked. The teachers uploaded tasks and materials for students in the learning platform, including written instructions for the tasks so that the tandem dyads could work at their own pace, according to the autonomy principle. In the learning platform, students and teachers accessed tandem dyads' video call channels that could be used for both oral discussions and instant messaging, and shared documents where the tandem partners could work together in writing. Thus, the students could interact orally – via speech, expressions, gestures, or artefacts (video calls) – or in writing (shared documents, instant messaging). As the teachers also had access to their interaction channels, they had a possibility to observe and participate in the tandem dyads' interactions. Also, the teachers had their own video call channels as well as used mobile phones to call each other.

#### **4 Data and methods**

This study aims to explore the teacher's role in virtual classroom tandem by analysing the teacher's orientation and interactions based on two research questions:

- 1) What interactional situations do teachers engage in during tandem language lessons in both physical and VLEs, and to what extent?

- 2) What aspects of student-centred tandem language learning need the teacher's interaction with individual students?

The data were analysed with qualitative content analysis (Elo & Kyngäs, 2008; Maier, 2017). The analysis was based on an inductive approach focusing on teachers' interactions in both physical and VLEs. To thematically categorise teachers' interactions during tandem language lessons (RQ1), sequences with interactions were coded based on the manifest sayings, that is, what was explicitly said (cf., Bengtsson, 2016). Adding to the overall view of teacher interactions, we focused especially on interactions between teachers and individual students (RQ2). The coding of manifest sayings was done by one researcher; thereafter, the interactions were categorised by all the three authors, based on the latent meanings of the interactions (cf. Bengtsson, 2016), that is, our interpretations of the tasks or roles the teachers orient to, and the learning environment and interaction partner(s). The categories identified in the data were measured in time, and these results were presented by descriptive statistics, completed with example sequences of the interactional situations.

The empirical data comprised video and screen recordings of three teachers' interactions from October to December 2017. The video recordings were conducted by one researcher using a video camera with external microphones attached to the teachers to capture their speech. The video technology followed the teachers in their respective physical classrooms and captured their interactions with the whole class and with individual students, and the teachers' interactions with each other via phone. The teachers themselves conducted screen recordings and captured everything they did on their computers, including students' video calls that the teachers observed and participated in. Interactional situations in the data have been transcribed focusing on both the verbal utterances, including pauses, and nonverbal actions, such as gestures, movements, and use of artefacts (see transcription key in Appendix 1), supporting the content analysis of teacher orientations. Swedish language use is marked in the examples with normal style, Finnish language use with **bold** style, and English in *italics*. The examples have been translated into English to reproduce the content as precisely as possible. The examples can be found in their original languages in Appendix 2.

All teachers voluntarily participated in the data gathering. The data gathering was done within an action-research-based development project. The project was built on a close collaboration between teachers and researchers, including regular joint planning, observations, and reflections on the activities. All parts of data gathering were negotiated between the project partners, and the teachers could decline participation in any part. As the data also comprised students in both physical and VLEs, the students were also asked for written permission to record them, and to use the data for analysis, and also in, for example, teacher education and in-service training. All the participation in the data gathering for students was voluntarily, and unbound to participation in the tandem cooperation, and all the participants could decline continued participation at any time. In the data transcription process, all names of persons, places, and schools were replaced with fictitious names or codes.

The data comprised nearly 10 hours of video and screen recordings from eight different tandem lessons – three lessons with Swedish and four lessons with Finnish as the target language, and one bilingual lesson – comprising approximately 4.5 hours of classroom video and five hours of screen recordings. For practical geographical reasons, five of the six video recordings were collected

in the Swedish-medium school, whereas the distribution of the screen recordings was more even, with four lessons in both schools. Table 1 presents the data, including video and screen recordings.

**Table 1.** Overview of data (hours:minutes:seconds). Fin = Finnish; Swe = Swedish.

Lesson and target language	Teacher camera: Swedish school	Teacher camera: Finnish school	Screen recording: Swedish school	Screen recording: Finnish school
Lesson one (Fin)	00:47:10			
Lesson two* (Swe)	00:55:45			
Lesson three (Swe)		00:48:58		
Lesson four (Fin)	00:44:40			
Lesson five (Swe/Fin)			00:24:32	00:39:48
Lesson six* (Fin)	00:53:45		00:47:55	00:48:10
Lesson seven (Fin)			00:44:20	00:24:30
Lesson eight (Swe)	00:24:08		00:46:40	00:33:35
Sum	03:45:28	00:48:58	02:43:27	02:26:03
<b>Total</b>	<b>04:34:26</b>		<b>05:09:30</b>	

\* Two teachers were present in the physical classroom.

In the Swedish-medium school, Finnish language instruction was divided into two different syllabi, here entailing the participation of two teachers. These teachers were both present in the two lessons (two and six). Screen recordings from lessons five and eight only covered parts of the lessons because students who experienced technical problems with their computers used the teachers' computers during the rest of the lessons. In these cases, only the part where the teachers actually had access to the computer was included in the data. Because of technical challenges with the screen-capture programme, lesson seven was only partially recorded in the Finnish-medium school.

## 5 Findings

### 5.1 Teachers' orientation and interactions during tandem lessons

We described teachers' interactions in virtual classroom tandem by building on an analysis of video and screen recordings from tandem lessons from both physical and VLEs. Table 2 presents the overall analysis based on the teacher's camera, including both teacher-student and teacher-teacher interactions.

**Table 2.** Teacher orientation and interactions during tandem lessons (% of the lesson and (minutes:seconds)).

Teacher orientation and interactions	Lesson one	Lesson two	Lesson three	Lesson four	Lesson six	Lesson eight
Teacher-led interactions (IRF) with the whole class	5.5% (02:35)	5.2% (02:54)	2.8% (01:23)	5.0% (02:15)	4.1% (02:12)	6.7% (01:37)



Interactions with the other teacher via phone or video calls	7.6% (03:36)	23.0% (12:51)	21.2% (10:23)	4.8% (02:08)	11.5% (06:10)	0.0% (00:00)
Interactions with individual students in the physical classroom	5.8% (02:43)	16.3% (09:05)	20.3% (09:57)	0.8% (00:22)	8.8% (04:44)	13.3% (03:12)
Interactions with individual students in the VLE	0.0% (00:00)	0.0% (00:00)	0.9% (00:25)	0.0% (00:00)	0.7% (00:24)	0.0% (00:00)
Non-interactional activities	81.1% (38:16)	55.5% (30:55)	54.8% (26:50)	89.4% (39:55)	74.9% (40:15)	80.0% (19:19)
<b>Total</b>	<b>100%</b> <b>(47:10)</b>	<b>100%</b> <b>(55:45)</b>	<b>100%</b> <b>(48:58)</b>	<b>100%</b> <b>(44:40)</b>	<b>100%</b> <b>(53:45)</b>	<b>100%</b> <b>(24:08)</b>

The categorisation of teachers' orientation and interactions during the tandem lessons (Table 2) showed that the extent of some types of orientation and interaction varied notably between lessons, for example, *interactions with the other teacher*, *interactions with individual students in the physical classroom* and *non-interactional activities*. Conversely, the category *teacher-led interactions (IRF) with the whole class*, which is directed to all students in the physical classroom, and *interactions with individual students in the VLE* were quite stable.

*Teacher-led interactions (IRF) with the whole class* covered, on average, 5% of the lesson (2.8–6.7%), which could be considered a low percentage, even in today's student-centred teaching (cf. Gardner, 2013; Hargreaves, 2004; Nuthall, 2005; Sahlström, 2008, 2017). One reason tandem teachers use a small amount of time for whole-class instructions and feedback is that tandem learning builds on student-centred pair work. Furthermore, the fact that the tandem dyads interact in their video calls using headphones also reduces the teachers' possibilities of interacting at the whole-class level.

The time used for teachers' *interactions with the other teacher via phone or video calls* varied noticeably. The medium for interaction with the tandem teacher at the other school was either a phone call or video call in the VLE. During the calls, the teachers mainly discussed organisational matters, for example, discussing students having technical problems or being absent and forming new tandem dyads. Thus, the amount of contact needed between teachers depended on how well technology was working and on students' presence, and varied between none and almost a quarter of the lesson (0.0–23.0%). Technical problems also affected how much support individual students needed during the lesson, which can be seen in *teachers' interactions with individual students in the physical classroom*, where a notable variation was observed between 0.8% and 20.3% of lessons. Both teacher-teacher and teacher-individual student interactions in physical classrooms were high during lessons two and three, which also included substantial technical problems with students' contacts with each other. *Teachers' interactions with individual students in the VLE*, however, stabilised at a low level (0.0–0.9%) and actually occurred in only two of the six tandem lessons observed with the teacher camera. Because teachers' participation in the VLE without oral interaction cannot fully be observed by the teacher camera recordings, they will be further analysed in Table 4 using the screen recording data from lessons five to eight.

The largest category in teachers' orientation and interactions was *non-interactional activities*, covering most of the lesson time (54.8–89.4%). This category covered activities other than oral interactions as active participation in a dialogue. For example, teachers sitting at their desks or computers or walking around in the classroom, observing, and following up while students were working with their tandem partners were counted as non-interactional activities for the teachers' part.

A high percentage in this category could be understood as the students' tandem cooperation working autonomously. Also, an active approach from the teacher in students' video calls, both observing and participating in the discussions, could create more opportunities to: i) identify students' individual learning needs and ii) support both partners. For a more detailed analysis of the teacher–student interactions, we focused on the teachers' interactions with individual students in the physical and VLEs.

## 5.2 Teachers' interactions with individual students in the physical classroom

As Table 2 presents, the amount of interactions between teachers and individual students varied between lessons, depending, for example, on technical problems. To provide a more detailed overview of the teacher's role, we further categorised interactions with individual students in the physical classroom into five subcategories and related them to three dimensions of the teacher's role in classroom tandem in physical classrooms (Pörn & Hansell, 2020). If features from different categories were combined in one sequence, they were then categorised according to the main orientation in the sequence.

**Table 3.** Teachers' interactions with individual students in the physical classroom (% of the lesson and (minutes:seconds)).

Interactional orientation	Lesson one	Lesson two	Lesson three	Lesson four	Lesson six	Lesson eight
Organising tandem dyads' cooperation	3.0% (01:25)	4.6% (02:35)	0.9% (00:26)	0.3% (00:07)	4.9% (02:38)	0.3% (00:04)
Instructing and discussing classroom activities/tasks	0.0% (00:00)	5.6% (03:06)	9.1% (04:27)	0.0% (00:00)	2.1% (01:09)	6.8% (01:39)
Orienting on technical issues	0.0% (00:00)	4.3% (02:24)	9.4% (04:35)	0.0% (00:00)	0.3% (00:08)	0.0% (00:00)
Feedback and reflections	2.8% (01:18)	0.2% (00:05)	0.5% (00:16)	0.0% (00:00)	0.0% (00:00)	4.3% (01:02)
Orienting on language related topics	0.0% (00:00)	1.6% (00:55)	0.4% (00:13)	0.6% (00:15)	1.5% (00:49)	1.9% (00:27)
<b>Total</b>	<b>5.8%</b> <b>(02:43)</b>	<b>16.3%</b> <b>(09:05)</b>	<b>20.3%</b> <b>(09:57)</b>	<b>0.8%</b> <b>(00:22)</b>	<b>8.8%</b> <b>(04:44)</b>	<b>13.3%</b> <b>(03:12)</b>

The first category, *organising tandem dyads' cooperation*, comprised 0.3–4.9% of the lesson time and entailed organising the students to their respective video call channels, for example, when it is unclear what channel they should be on (Example 1), have technical problems, alongside reorganising the tandem dyads if students are absent, and a need exists for temporary tandem dyads. Example 1 shows this kind of situation in the Swedish-medium school in the beginning of a tandem lesson with Finnish as the target language:

**Example 1.** Finding the tandem partner on a video call channel.

- 1 FLT: [SWstud1] you had
- 2 SWstud1: [F1stud1] yes
- 3 FLT: twentytwo
- 4 SWstud1: yes I know and I have entered that but it says I am the only participant

- 5 FLT: so you had [FIstud1] and who else do you [SWstud2] have there  
 6 SWstud2: [FIstud2] and [FIstud3] who I am usually with  
 7 FLT: so  
 8 SWstud1: [FIstud2] should be with | [SWstud3]  
 9 FLT: | so [FIstud2] should go with [SWstud3] on  
 10 line twenty six (0.8) I can- will contact the teacher there (1.8) but tell  
 11 me right away if they disappear there so

Organising activities appears mostly in the beginning of the tandem lessons before the students establish the video call contact with their tandem partners. This is also the case in example 1, where the Finnish language teacher (FLT) helps the students in the Swedish-medium school (SWstud) to find the same channels with their tandem partners from the Finnish-medium school (FIstud) at the beginning of the lesson, as it seems to be unclear for some students in both schools which channels they should be on.

The second category is *instructing and discussing classroom activities/tasks* when students need help in understanding instructions, covering 0.0–9.1% of the lesson time. The students have instructions for activities and tasks in writing, and the L1 student is supposed to support the L2 student in understanding the instructions, but sometimes the students need the teachers' support with the instructions, as in example 2 from the Swedish-medium school during a tandem lesson with Swedish as the target language:

#### Example 2. Instructing a writing task.

- 1 Stud: is she supposed to first write in Swedish and then we correct or should  
 2 we correct while she writes  
 3 FLT: well you can choose- while she writes you can for example give- but not  
 4 really like you start writing | but like  
 5 Stud: | no no  
 6 FLT: you ask some questions- this you could say in an | other way or- how  
 7 would you correct it  
 8 Stud: | mm okay

In example 2, the student asks for clarification of the instructions in a task including writing, and on their role as L1 user in the task. The teacher describes for the L1 student how to support their tandem partner in writing in the target language, thus clarifying the instructions on which partner is responsible for what parts of the task. Besides instructing, this sequence reminds us of coaching the students in their respective roles in the tandem dyad (cf. Pörn & Hansell, 2020).

The third category is *orienting on technical issues*, covering 0.0–9.4% of the lesson time and comprising, for example, helping the students to log into the VLE, answering their questions about technical issues (Example 1), and solving problems with dysfunctional links, as in example 3 from the Finnish-medium school and a tandem lesson with Swedish as the target language:

#### Example 3. Saving the document.

- 1 Stud: [SLT name] is this document saved like directly here or  
 2 SLT: the document is saved automatically all the time

The sequence in example 3 is among the shortest interactional sequences in the data. The student asks the Swedish language teacher (SLT) if the shared

documents are automatically saved, and the teacher confirms this. Also, other technical issues can demand remarkably more support from the teacher, as in example 4, which is an excerpt from a longer sequence where the student and the teacher in the Finnish-medium school have repeatedly tried getting the computer and the software to work correctly during a tandem lesson with Swedish as target language:

**Example 4.** Restarting the computer.

- |   |       |   |
|---|-------|---|
| 1 | SLT:  | <b>nothing works</b>  |
| 2 | Stud: | <b>no</b>   |
| 3 | SLT:  | ((looks at the computer)) <b>well it cannot be helped but to shut it down</b> |
| 4 | Stud: | <b>com   pletely</b>  |
| 5 | SLT:  | <b>  if it does not react to anything</b> ((points at the screen))            |
| 6 | Stud: | <b>should I press like this</b> ((points at the screen))                      |
| 7 | SLT:  | <b>mm (1.3)   so now you can- and tell them it will be a while</b>            |
| 8 | Stud: | <b>  okay I will text them that</b>   |

In example 4, the student mentions that nothing they tried helps and the programme does not work. The teacher states that there seems not to be other options than to restart the computer and reminds the student to communicate this to their tandem partner so that they will know what is happening. Thus, the teacher orients to the technical problem but also refers to reminding the contact with the tandem partner, resembling of organising tandem dyad's cooperation.

The fourth category, *feedback and reflections*, comprised 0.0–4.3% of the lesson time and included providing feedback on students' work and progression, as in examples 5 and 6:

**Example 5.** Feedback to the students.

- |   |       |  |
|---|-------|--|
| 1 | FLT:  | eh how was it (0.6) did you have a good day                                  |
| 2 | Stud: | yea:h  |
| 3 | FLT:  | >yeah   yeah<  |
| 4 | Stud: | I guess  |
| 5 | FLT:  | yeah I listened for a while to your (.) discussion and I think you (0.7) you |
| 6 |       | had a good discussion and (.) I thought like- I think it was goo- great that |
| 7 |       | you like (0.8) you: explained (.) things (0.7)   ve-                         |
| 8 | Stud: | yeah so eh well  |

**Example 6.** Encouraging the student.

- |   |       |  |
|---|-------|--|
| 1 | SLT:  | <b>it did go well (1.5) you progress &lt;all the time&gt;</b>                |
| 2 | Stud: | (xxx)  |
| 3 | SLT:  | <b>just think if we had this in every course you would speak really good</b> |
| 4 |       | <b>Swedish by spring</b>   |
| 5 | Stud: | <b>I cannot (xxx)</b>  |
| 6 | SLT:  | <b>you can if you just try</b>   |
| 7 | Stud: | <b>well I can try</b>  |

Example 5 is from the Swedish-medium school and a tandem lesson with Finnish as target language. The Finnish language teacher asks the student about their overall experience of the lesson, if they had a 'good day' regarding tandem. The teacher also comments that they had been observing this tandem dyad in the VLE

and gives positive feedback on their interaction and on the students' way of explaining things to the tandem partner. Example 6 is from the Finnish-medium school and a tandem lesson with Swedish as the target language. The Swedish language teacher gives feedback to a student regarding the students' progression in using and learning Swedish. The student indicates doubts on their capability and progress, so the teacher encourages the student that they can learn if they try. Besides giving feedback on the students' input and progress, this category also included the teachers asking about students' experiences and feedback on the lessons they participated in. The feedback is linked more to the overall feedback from the teachers to students and *vice versa*, rather than on a single, specific task or activity, and it is most common at the end of the lessons when the students have ended their video calls.

The fifth category of teacher interactions with individual students is *orienting to linguistic aspects*, which comprises 0.0–1.9% of the lesson time. It entails mostly questions regarding the vocabulary, like in example 7, where a student asks the Finnish language teacher in the Swedish-medium school for help with vocabulary in Finnish during a tandem lesson with Swedish as target language:

**Example 7.** Orienting on linguistic aspects.

- |    |       |   |
|----|-------|---|
| 1  | Stud: | [FLT name] what is differ in Finnish  |
| 2  | FLT:  | was your friend not able to help (1.0)   was your friend not                    |
| 3  |       | ((walks toward student))  |
| 4  |       | able to- (1.2) differ (0.7) <b>to differ from something</b>                     |
| 5  | Stud: | (xxx)   |
| 6  | Stud: | <b>it differs</b>   |
| 7  | FLT:  | <b>differ</b> (1.3) what is the difference <b>what is the <u>difference</u></b> |
| 8  | Stud: | no but   like Finnish differs from these  |
| 9  |       | ((points at paper))   |
| 10 | FLT:  | <b>Finnish differs (0.4) from something</b>                                     |

In example 7, the teacher responds to the question first by asking if the student's tandem partner could not help with the vocabulary. Then the teacher answers the question and a discussion on the words *differ* and *difference* occurs. Orienting on linguistic aspects relates to language as a school subject. Because classroom tandem is organised within language teaching, teachers can be expected to orient towards the role of language experts (Pörn & Hansell, 2020). The amount of language support from teachers was found to be under 2% of the lesson time, which can be considered low for language lessons. This can relate to the fact that tandem learning is built on student-centred, two-way learning, where tandem partners are supposed to be each other's main language models and support (Karjalainen et al., 2013). Another reason for the small amount of time used for orienting on linguistic aspects during interaction with individual students in the physical classroom is that linguistic questions and challenges are most often actualised and topicalised during the tandem dyads' discussions, and thus discussed also with the teacher mainly in the VLE through teacher participation in the tandem dyads' video calls (see chapter 5.3, cf. Hansell et al., 2020; Pörn & Hansell, 2020).

The four other categories presented in this chapter – i) organising tandem dyads' cooperation, ii) instructing and discussing classroom activities or tasks, iii) orienting on technical issues, and iv) feedback and reflections (Table 3) – relate to

facilitating the students' learning processes. The facilitator role comprises overall planning of classroom activities, supporting students in achieving the goals set for learning and instruction, facilitating students' learning processes, and assessing their learning (Pörn & Hansell, 2020). How much lesson time these activities took up depended mainly on three aspects: how many students were absent, the amount of technical problems and students' understanding of the instructions. With a high volume of these problems, attending to them could take up to one-fifth of lesson time (lesson 3). During lessons without such issues, the facilitation time was practically non-existent (lesson four).

In face-to-face classroom tandem learning, a central role identified for the teacher is a coach supporting students in their reciprocal cooperation and development towards autonomous learners (Pörn & Hansell, 2020). In virtual classroom tandem, the teacher cannot follow the tandem dyads' cooperation or interact with both partners of a tandem dyad in the physical classroom. Thus, if the teachers want to coach the tandem dyads, they need to participate in their interactions where these interactions happen, that is, in the VLE.

### 5.3 Teachers' interactions with individual students in the VLE

Teacher interaction with individual students in the VLE was captured by screen recordings on teachers' computers in both schools for four lessons. The analysis shows the extent to which the teachers were engaged in the VLE through their participation in students' video calls, including both observations and interactions (Table 4). The screen recordings did not cover all the lesson time because the teachers sometimes needed to let students use their computers when students' computers had technical problems.

**Table 4.** Teacher participation in the VLE (% of the lesson and (minutes:seconds)).

Participation in the VLE		Lesson five	Lesson six	Lesson seven	Lesson eight
Finnish-medium school	Listening	13.5% (05:23)	18.0% (08:40)	53.7% (13:10)	5.1% (01:42)
	Interacting	0.0% (00:00)	4.8% (02:18)	0.0% (00:00)	0.0% (00:00)
	<b>Total</b>	<b>13.5% (05:23)</b>	<b>22.8% (10:58)</b>	<b>53.7% (13:10)</b>	<b>5.1% (01:42)</b>
Swedish-medium School	Listening	1.4% (00:20)	29.3% (14:02)	0.4% (00:10)	0.0% (00:00)
	Interacting	0.0% (00:00)	0.8% (00:24)	0.0% (00:00)	0.0% (00:00)
	<b>Total</b>	<b>1.4% (00:20)</b>	<b>30.1% (14:26)</b>	<b>0.4% (00:10)</b>	<b>0.0% (00:00)</b>

Teacher interactions in tandem dyads' video calls can be described as modest. The total time for both teachers together participating in the VLE, averagely, was 15.9% of the screen recordings. Proportionally, the variation between lessons was notable, starting from none to half (0.0–53.7%) of the screen recording time. However, this was influenced because the screen recording from lesson seven in the Finnish-medium school only covered part of the lesson; thus, the VLE

participation percentage was 53.7, equaling approximately 13 minutes, while 22.8% of lesson six equaled approximately 11 minutes. The Swedish language teacher in the Finnish-medium school was more active in all the observed lessons in the VLE – 23.8% on average – than the Finnish language teachers in the Swedish-medium school, with an average VLE activity of 8% in the screen recordings.

When the teachers participated in video calls, they mainly observed the students' interactions without participating in oral or written interaction. During most of the lessons, they did not actively interact with the students in the VLE. When the teachers interacted with the students, covering at most 4.8% of the lesson time, the interactions were sometimes initiated by the teachers explicitly excusing the interruption of the tandem dyads' discussion (Hansell et al., 2020). Example 8 was from the Swedish-medium school and a tandem lesson with Finnish as target language. Two students (L2a and L2b) from the Swedish-medium school (Finnish as L2) cooperated with a student from the Finnish-medium school (Finnish as L1). The Finnish language teacher observed their interaction in the VLE about half a minute before the beginning of the excerpt in example 8:

**Example 8.** Here I will interrupt.

- |    |      |  |
|----|------|--|
| 1  | L2a: | <b>I am not satisfied</b> (0.4) like (0.8) uh <b>if it is not</b> (1.3) like (1.7) |
| 2  |      | <b>what is</b> ↑ perfect <b>or</b> perfect   <b>in Finnish</b>                     |
| 3  |      | ((turns to screen))  |
| 4  | L1:  | perfect   perfect  |
| 5  | L2a: | perfect  |
| 6  |      | ((nods and turns to L2b's screen))   |
| 7  | L2b: | (what did you say) <b>when I am</b>   <b>not</b>                                   |
| 8  | FLT: | here I will interrupt and say that <b>creative</b>                                 |
| 9  |      | means   creative   |
| 10 |      | ((L2b looks at the FLT in the physical classroom))                                 |
| 11 | L2a: | okay   |
| 12 | L2b: | what is cr- >but what was stu↑bborn then< ((both L2:s look at                      |
| 13 |      | their papers))   |
| 14 | FLT: | o:h what was the word you had   <b>hard-headed stubborn</b>                        |
| 15 | L2b: | <b>stubborn</b> (1.2) oh right↓  |
| 16 |      | ((looks at the screen))  |
| 17 | FLT: | yeah↓  |

In example 8, the students discuss in Finnish characteristics they think they have, and use both Swedish and English as support languages to reach mutual understanding. The L2 students mix up the Finnish words for 'stubborn' (Fin. *itsepäinen*) and 'creative' (Fin. *luova*), and as the L1 student does not notify them about this, the teacher interrupts and joins the interaction on line 9, and clarifies the meaning of the words for the students.

During the reflective discussions included in the project, the teachers expressed feeling unaccustomed to and uncomfortable with participating in students' video calls and that they were disturbing the tandem partners' interaction with each other. Theoretically, participating in the video calls could be viewed as equivalent to a teacher walking around a physical classroom and observing students' work (cf. Pörn & Hansell, 2020), but the teachers perceived it differently. Interviews with tandem students reveal that the students are not as opposed to teachers'

participation in the VLE; they find it somewhat unnerving but good for their learning process (Smeds, 2018).

In the VLE, the teachers mainly oriented themselves to the role of a language expert. The teacher's participation could be initiated either by the teachers during observations in the VLE, as in example 8, or by the students by one of the tandem partners asking, in the physical classroom, the teacher to join the video call (cf. Hansell et al., 2020). A limitation of the VLE used in the schools in our study is that the students could not invite the teacher to join their video calls virtually. This, however, depends on the choice of VLE, not on the tandem cooperation *per se*.

## 6 Discussion and conclusion

This study aims to explore the teacher's role in virtual classroom tandem, combining both physical and VLEs that entail different prerequisites for interaction. As research in tandem language learning has previously mainly focused on the interaction between tandem partners in informal learning situations (Bower & Kawaguchi, 2011; Elstermann, 2016; Karjalainen, 2011; Tian & Wang, 2010), there is limited knowledge about the teachers' role in tandem language teaching in the formal school context. The educational context focused on in this study entails tandem cooperation between Finnish- and Swedish-medium schools within subject teaching in a second national language. The analysed data comprised video recordings from the physical classroom in the two cooperating schools, and screen recordings from the teachers' computers, catching their actions in the VLE. Although the amount of data of the current case study were somewhat limited and relate to one particular example of VLE, the analysis contributes to a deeper understanding of virtual tandem language learning and teaching within curriculum-based language education. To outline the teacher's role in virtual classroom tandem, we focused on teachers' engagement in interactional situations during tandem lessons, including the interplay between the physical classroom and VLE.

The results reveal that the analysed tandem lessons included a notably low share of teacher interactions, covering about 10–45% of the lesson time. Teachers' whole-class instructions – covering, on average, only 5% of the lesson time – occur almost solely in the beginning and at the end of the lessons, that is, outside the time reserved for the tandem dyads' interactions in the VLE. The low amount of teacher interaction is aligned with tandem language learning, building strongly on a student-centred approach (Pörn & Hansell, 2020) and with the more general shift in the teacher's role from an information dispenser to a coach, and the shift in focus from teaching to learning processes (Cifuentes, 1997; Sahlström, 2008; Wang, 2002). The amount of teacher interaction strongly depends on the need for (re)organising tandem dyads and technical support for the students in lesson at hand. When the students have well-functioning contact with their respective tandem partners, the teacher's role becomes marginal. Thus, in virtual classroom tandem, the emphasis seems to be on the teacher's role as a facilitator, that is, planning, observing, and evaluating the teaching and the students' learning processes (cf. Hansell et al., 2020; Pörn & Hansell, 2020).

The virtual classroom tandem builds on two-way learning between the tandem partners in the VLE, according to the tandem principles of reciprocity and autonomy (Karjalainen et al., 2013; O'Rourke, 2007; Pörn & Hansell, 2019).



Although the teachers can participate in the VLE, they mainly interact with individual students in their respective physical classrooms. In the analysed data, teacher participation in VLE was fairly limited and entailed mainly observing the students' interactions. Participating in VLE enables the teachers to observe and evaluate the students' language use and interactions with their tandem partner and to help them when they face challenges in reaching mutual understanding. Thus, in the VLE, the teachers seem to orient mainly towards their role as language expert. Considering that tandem is a part of subject language teaching, the occasions when the teachers orient to the language expert role are limited, which can be understood against that, in tandem, the tandem partners function as each other's main language model and support (Karjalainen et al., 2013). Participation in VLE also enables the teachers to coach the tandem dyads in their cooperation, which Pörn and Hansell (2020) found to be a central dimension of the teacher role in physical classroom tandem, but this was unobserved in the analysed data. Instead, the teachers occasionally gave individual feedback to their own students – one part of the tandem dyads – in the physical classrooms, which can be seen as individual or peer-group coaching (cf. Elstermann, 2016).

To conclude, the implementation of virtual classroom tandem focused on in this study combined VLEs – as the arena for the tandem dyads' interactions – with the physical classroom where the teachers facilitated their own student groups. While the teachers are mainly responsible for their own teaching subject, they should also support the students in the other target language, that is, the Swedish language teacher supporting students with Finnish as the target language and *vice versa* (cf. Hansell et al., 2020). This implies the need for teachers to cooperate across the two language subjects instead of focusing on their respective target language. The burgeoning technical development and increased repertoire of digital tools create new possibilities for virtual tandem cooperation, both combined with physical classrooms and within distance education generally. Thus, there is a need for further research on how the possibilities and limitations of different VLEs affect the tandem partners' interactions and learning processes and the teacher's possibilities to interact with the students.

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## Appendices

### Appendix 1. Transcription key.

(.)	a pause less than 0.2 seconds
(0.5)	a pause indicated in tenths of seconds
	indicates the beginning of an overlap/overlapping talk
:	prolongation/stretching of the prior sound
↑	rising intonation
↓	falling intonation
text	talk in Swedish
<b>text</b>	talk in Finnish
<i>text</i>	talk in English
text-	cut-off or self-interrupted talk
<u>text</u>	stress or emphasis
>text<	faster talk than normal
<text>	slower talk than normal
((text))	non-verbal/embodied activity
(text)	likely hearing of talk
(xxx)	inaudible

### Appendix 2. Examples in original language.

#### Example 1. Finding the tandem partner on a video call channel.

1	FL:	[SVstud1] du hade ju
2	SVstud1:	[F1stud1] ja
3	FL:	tjugutvåan
4	SVstud1:	ja ja väit å ja ha gaji in på he men e star att ja e ensam deltagare
5	FL:	så du hade [F1stud1] å vem annan har du ännu [SVstud2] där
6	SVstud1:	alltså [F1stud2] å [F1stud3] som ja brukar va me
7	FL:	så dedä
8	SVstud1:	[F1stud2] ska ju me   [SVstud3]
9	FL:	så dedä [F1stud2] ska far me [SVstud3] på linje
10		tjugusex (0.8) ja kan- tar kontakt me läraren där så (1.8) men säg bara
11		genast om di försvinner där så

#### Example 2. Instructing a writing task.

1	Stud:	ska hon först skriv på svensk å sen ska vi rätt eller ska vi rätt medan on
2		skriver
3	FL:	nå du får lite välja- medan hon skriver kan du till exempel ge- men int direkt
4		att du börjar skriva   men att
5	Stud:	nå nå
6	FL:	du ställer lite frågor- det här sku du kunna säga på ett   annat sätt eller- hur
7		sku du korrigera de
8	Stud:	mm okej

**Example 3.** Saving the document.

- 1 Stud: [SL namn] tallentaaks tää tän dokumentti niinku suoraan tänne vai  
2 SL: tallentaa automaattisesti koko ajan dokumenttia

**Example 4.** Restarting the computer.

- 1 SL: ei mikään toimi  
2 Stud: ei  
3 SL: ((ser på datorn)) no eihän se auta kuin sulkee  
4 Stud: kok | onaan  
5 SL: | jos se ei mikkää- mihinkään reagoi ((pekar på skärmen))  
6 Stud: painaaks mä niin kuin näin ((pekar på skärmen))  
7 SL: mm (1.3) | eli nyt sä taas- ja laita että nyt kestää hetken  
8 Stud: | okei laitan sille viestiä että

**Example 5.** Feedback to the students.

- 1 FL: eh hu kändes de va de (0.6) hade du en bra dag  
2 Stud: jä:  
3 FL: >jä | jä<  
4 Stud: | vetcha he  
5 FL: jä ja lyssna en stund er (.) diskussion så tycker ja ni d- (0.7) ni hade bra  
6 diskussion å (.) de tyckt som tycker ja va br- jättebra att du som (0.8)  
7 du: förklarade (.) saker (0.7) | jä-  
8 Stud: | ja: alltså eh nå

**Example 6.** Encouraging the student.

- 1 SL: hyvä tohon meni (1.5) sinä edistyt <koko ajan>  
2 Stud: (xxx)  
3 SL: ajattele jos ois joka kurssissa tätä niin sä keväällä puhusit tosi  
4 hyvä ruotsia  
5 Stud: mä en osaa (xxx)  
6 SL: osaat sinä ku vaan yrität  
7 Stud: no mä osaan yrittää

**Example 7.** Orienting on linguistic aspects.

- 1 Stud: [FL namn] va e skiljer sig på finska  
2 FL: kunde int kompisen hjälpa (1.0) | kunde int | kompisen- (1.2)  
3 | ((går mot studeranden))  
4 Stud: | (xxx)  
5 FL: skiljer sig (0.7) eroaa jostakin  
6 Stud: se eroaa  
7 FL: eroa (1.3) va e skillnaden mikä on ero  
8 Stud: nä men | alltså att finska skiljer sig från dessa  
9 | ((pekar i sitt papper))  
10 FL: suomi eroaa (0.4) jostakin

**Example 8.** Here I'll interrupt.

- 1 L2a: **en olen tyytyväinen** (0.4) typ (0.8) öh **jos se ei on** (1.3) typ (1.7)  
 2 | **mitä**↑ perfekt **eli ku** *perfect on* | **suomeksi**  
 3 | ((vänder sig mot skärmen))  
 4 L1: | **täydellinen** | **täydellinen**  
 5 L2a: | **täydellinen**  
 6 | ((nickar och vänder sig  
 7 mot L2b:s skärm))  
 8 L2b: (va sa du nu) **kun en** | **ole**  
 9 FL: | nu lägger jag mig i och säger att **luova**  
 10 betyder | kreativ  
 11 | ((L2b ser på FL i fysiskt klassrum))  
 12 L2a: | jaha  
 13 L2b: | va e kr- >men va e e↑nvis då< ((båda L2 tittar i sina  
 14 papper))  
 15 FL: å: va hadd ni för ord | **jääräpäinen itsepäinen**  
 16 L2b: | **itsepäinen** (1.2) ja ojdå↓  
 17 | ((tittar på skärmen))  
 18 FL: jao↓