



Delay in L2 interaction in video-mediated environments in the context of virtual tandem language learning

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ABSTRACT

The purpose of this article is to describe tandem dyads' interactional resources and social practices for upholding intersubjectivity in video-mediated environments (VMEs) within the context of tandem language learning in a virtual learning environment (eClassroom tandem) arranged within formal language education in upper secondary schools. Data consists of video and screen recordings of several tandem dyads' video-mediated interaction. Using conversation analysis, the study analyses how "lag" (a delay in the connection) affects participants' meaning-making and ways to maintain intersubjectivity in VMEs. The results show that participants use different interactional resources and practices regarding turn-taking, turn design, and turn construction to maintain intersubjectivity. Clearly defined conversational roles in the assignments appear to help participants to cope with delays. Additionally, in the context of eClassroom tandem, the roles of the L1 speaker and the L2 speaker appear to be of situated importance for upholding a mutual understanding in VMEs.

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1. Introduction

The use of technology in second language (L2) education for authentic communication and interaction extends L2 learning from the context of the physical classroom to mediated interaction in online Internet contexts with authentic recipients who are interested in learning each other's first languages (L1) (Kern, Ware, & Warschauer, 2004; Thorne, 2008; Thorne & Black, 2007; Tudini & Liddicoat, 2017). This interaction can be asynchronous (e-mail, forums or Twitter), quasi-synchronous (instant-messaging [IM]), or synchronous (real-time video and/or text chats).

This article focuses on synchronous digitally mediated interaction in L2 education, which, since the 1990s, has formed a field of inquiry within research on L2 learning (Chun, 1994; Kern, 1995; Warschauer, 1996). This early research often involved experimental, statistical, and comparative methodologies on language use in synchronous text chats with a focus "on the most quantifiable and easily measured aspects of online communication" (Kern et al., 2004, p. 243). These studies found that L2 output is increased and the linguistic quality of the output is more sophisticated with the help of mediated interaction in the form of synchronous text chats.

A second wave of research on L2 learning in digitally mediated interaction promoted a view on context and interaction beyond the textual chats and, thus, moved towards more qualitative methods and socioculturally influenced theories (Belz, 2002; Darhower, 2002; Thorne, 2003). In other words, this research enables a better understanding of digitally mediated interaction and authentic L2 interaction (Kern et al., 2004; O'Rourke, 2005) and displays the complexity of the new technological contexts where humans are actors and the technological settings are artefacts, or mediators (Arminen, Licoppe, & Spagnolli, 2016). Both strands of research use textual data (chat and chat logs) for the analysis and treat the chat data as a resource, rather than as a topic (Rapley, 2001). The data is used as a "way of understanding the people behind the screen" (Meredith & Potter, 2014, p. 371), instead of evidence of "social practices in their own right" (Lamerichs & te Molder, 2003, p. 461).

In order to comprehend digitally mediated interaction for the larger aims of L2 education, we need a deeper understanding of what participants do during the interaction. That is, how is the interaction in these digitally mediated environments structured and organized? It is especially important for L2 researchers to understand whether the digitally mediated environments bring in additional challenges to the interaction, since it may already be challenging for participants to use the L2 in the interaction (Tudini & Liddicoat, 2017). Previous research on digitally mediated interaction introduces "lag," or a delay, in the digitally mediated

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interaction (Gutwin et al., 2004) that interferes with the structure of conversation on several levels (see Olbertz-Siitonen, 2015, for a review).

In the current L2 research on digitally mediated environments, there seems to be a need for an enhanced understanding of both the contextual and the interactional dimensions of participants' language use as it is taking place, and conversation analysis (CA) seems to be suited for this purpose (Balaman, 2015; Nguyen, 2017; Olbertz-Siitonen, 2015; Tudini & Liddicoat, 2017). The interaction analyzed in this article is from several tandem dyads' video chats in an eClassroom tandem context. A tandem dyad with different L1s learn each other's L1 in-and-through interaction in reciprocal cooperation. The video-mediated environment (VME) represents a so-called "fractured" environment (Hjulstad, 2016; Luff et al., 2003). In other words, it constrains some aspects of the interaction that would be available in a face-to-face conversation. Therefore, the data include recordings from both of the sites to provide a more holistic view of the conversations. Participants, themselves, do not have access to their co-participant's perspective on the conversation. However, for the analyst, with a purpose to investigate participants' ways of dealing with delay in video chats, the access to both perspectives on the same situations may prove invaluable (Olbertz-Siitonen, 2015).

The analyzed situations are characterized by problems of understanding that emerge when engaging in interaction in VMEs that delay the conversation between the participants; that is, the connection is "lagging". In the data, there appeared to be an omnipresent lag; that is, delay, to some degree, was omnipresent. The aim is to investigate the practices used by participants to handle the consequences caused by delayed turns at talk in VMEs and how they upheld the intersubjectivity. This article describes tandem partners' social practices for upholding intersubjectivity during video-mediated interaction and, hence, contributes to, what Tudini and Liddicoat (2017) mention as one area in which there remains work to be done; namely, our understanding of the affordances and constraints created in the interaction in VMEs in L2 education.

2. A CA perspective on social interaction and L2 learning

Conversation Analysis (CA) began with an interest in studying language use, talk-in-interaction, as a sociological phenomenon; that is, how language is used to perform diverse social actions when participants are engaged in joint activities (Sacks, 1995; Stivers & Sidnell, 2012). CA seeks to uncover the methods, practices, and patterns that participants use to perform and interpret social action, and examines talk in regard to what it is doing, instead of what it is about (Schegloff, 1996, 2007).

During the last decade, there has been a growth in CA-studies on L2 learning as a response to the question of how language use and language learning are interconnected (Firth & Wagner, 1997, 2007; Hall et al., 2011; Hall, 1997; Kääntä, 2010; Kurhila, 2001; Markee & Kasper, 2004; Markee, 1994, 1995, 2000, 2004; Seedhouse, 2004 and many more). These studies argue that CA's participant-oriented analysis of social interaction can help to better understand how L2 learning in interaction is accomplished. Several CA studies on L2 learning have focused on repair practices¹;

that is, practices for upholding and restoring mutual understanding (Firth & Wagner, 1997; Hellermann, 2009; Kääntä, 2010; Kasper, 2009; Kurhila, 2001; Macbeth, 2004; Markee, 2000; McHoul, 1990; Seedhouse, 2004; Slotte-Lüttge, 2005; Üstünel & Seedhouse, 2005; Wong, 2000). Mutual understanding is at the heart of human social interaction (Kasper, 2009; Schegloff, 2007) and, if lost, so too is the precondition for mutual social activity (Mondada, 2011). One major reason for why so much CA research on L2 learning focuses on repair practices is that breakdowns of intersubjectivity, troubles in sense-making practices, and a lack of mutual understanding in the social interaction may hinder L2 learning (Hall et al., 2011; Hellermann, 2009; Kasper, 2009; Markee, 2000; Seedhouse, 2004). This article focuses on situations in which participants appear to orient to problems of understanding in the VME when there is delay in the connection.

In this article, however, we are not focusing on repair practices per se. Instead, the focus is on the social practices employed by participants to cope with delay in the VMEs. Hence, we employ an emic approach to the phenomenon of upholding intersubjectivity, which involves a participant's perspective on how participants orient to and use diverse interactional resources to uphold intersubjectivity in the investigated L2 educational settings (Seedhouse, 2007). Part of these resources is the system of turn-taking, which is one of the building blocks for how social interaction is made possible, because participants share a knowledge of the structures and norms that concern the organization of social action (Drew, 2012; Stivers & Sidnell, 2012). This knowledge is salient to participants as they establish and maintain a mutual understanding—intersubjectivity—of what they are saying and doing when engaged in joint activities. Part of this knowledge is the orientation to turn-taking (Clayman, 2012; Drew, 2012; Sacks, Schegloff, & Jefferson, 1974). Taking turns is a familiar matter to all participants of any social interaction and context. It constrains opportunities for participation in social interaction and shapes the turn design and the social actions (Drew, 2012). It is significant as a basic form of social practice in its own right. A requirement of turn-taking is that participants must coordinate their social practices with one another. This coordination is finely tuned and orderly, and the transition from one speaker to another is managed with minimal silence between turns and hardly any overlapping speech. These spaces between turns are called *transition-relevance places* (TRP, Clayman, 2012), which are places in the interaction where a speaker change becomes a possibility that may be realized. TRPs are not only marked when they occur, they are also projected through social practices that indicate, in the context, that the current turn is possibly coming to a close. Localizing these TRPs in a VME when talk is delayed may prove to be more of a challenge than it is in face-to-face interaction.

Since TRPs and turn-taking are essential for upholding intersubjectivity, we need to better understand how participants cope with delay in VMEs (Olbertz-Siitonen, 2015), especially in L2 VMEs where mutual understanding may already be strained because of the use of the L2 (Tudini & Liddicoat, 2017). Previous research on VMEs, turn-taking and delay indicate that more or less delay lead to more or less overlap, interruptions, and mismatch between contributions that disrupt the flow of ongoing talk (Ruhleder & Jordan, 2001). Additionally, studies on audio-only teleconferences have found that these disruptions may lead to participants perceiving their co-participants as rude (Ruhleder & Jordan, 2001; Schoenberg, Raake, & Koeppel, 2014). Other studies find that participants, although not having an 'actual' common frame of reference in the VME, orient to a presupposition of a common frame of reference, and that this presupposition is what supports the meaning-making (Heath & Luff, 2000). This is supported by studies that show how participants may create their own practices for turn-taking (Fischer & Tenbrink, 2003), adapt their practices to the delay

¹ "By *repair*, we refer to practices for dealing with problems or troubles in speaking, hearing, and understanding the talk in conversation (and in other forms of talk-in-interaction, for that matter). I want to underscore the phrase 'the talk' in my reference to 'problems in understanding the talk'; for we did not mean to include within the scope of 'repair' all practices addressed to problems of understanding (like understanding exactly how the Internet works), only the narrower domain of 'understanding what someone has just said'-though there can on occasion be only a fuzzy boundary between these." (Schegloff, 2000, p. 207)

(Egger, Schatz, Schoenberg, Raake, & Kubin, 2012), or simply have fun with it (Rintel, 2010).

There is some insight into how delay influences VMEs. However, these studies are mostly from an etic perspective. Although others have addressed the question of how participants approach and handle delay in interaction (Olbertz-Siitonen, 2015; Rintel, 2010), the emic perspective is underexplored. Therefore, the purpose of this article is to analyze how participants cope with the problems related to delayed turns at talk in VMEs. In these analyses, we strive to understand the interactional resources that participants employ to solve these problems of understanding and to discover the social practices for upholding intersubjectivity during video-mediated interaction in the context of eClassroom tandem within L2 education.

3. Methodological considerations when studying VMEs

The use of CA to analyze L2 interaction in VMEs places certain demands, or requirements, on the data collection (Giles, Stommel, Paulus, Lester, & Reed, 2015; Meredith & Potter, 2014). CA's aim to study the actual organization of practices in human interaction requires recordings of naturally occurring activities, including naturally occurring digitally mediated interaction (Giles et al., 2015; Mondada, 2012). Implementing these requirements means that data should be collected, at least, as screen recordings of one participant's screen as the interaction occurs. Text and video chats are interactional and screen recordings provide access to the participants' situated orientations and actions. Analysing these helps us to understand the interaction and meaning-making, per se (Sacks et al., 1974; Meredith, 2015). The recordings also provide data on how the messages are constructed (copy/pasted from another site, parts of the text erased on account of what the recipient wrote while the message was being written, and so on). The use of additional video cameras provides access to the semiotic resources that individuals use in front of, and around, the screen (Aarsand, 2007; Musk, 2014; Musk & Cekaite, 2017; Thorne et al., 2015). This provides a better insight into participants' situated actions and furthers the analysis of situations in which the technology is not working.

Another consideration for the study of interaction in VMEs from a participant's perspective is that the participants are located in different physical locations and are using two different computer screens (Heath & Luff, 2000). Hence, for a better understanding of participants' social actions and for an emic analysis from both participants' perspectives, both participants would need to be video recorded and both screens would need to be recorded. This allows for a better understanding of, for example, whether troubles of intersubjectivity concern technical difficulties, language knowledge (or lack thereof), or something else (O'Rourke, 2005). This article employs video data recorded in the eClassroom tandem context (in the Spring of 2016), where both camera and screen recordings were employed. However, when recording two participant's perspectives, the issue of an emic perspective becomes apparent; that is, which participant's perspective is the one to be analyzed. Participants receive (hear and see) two different versions of the same conversation because of the fractured environment that VMEs are, including different degrees of delay, which is in focus in the present study. The analyst, then, gets two perspectives, two contexts, of the same situation, because of the fractured VME and its omnipresent lag, which affect the connections of the two perspectives in different ways. In this study, we have strived to understand both participants' "own" contexts. In this way, we can answer the classic CA tripartite question "Why that, in that way, right now?" (Seedhouse, 2004, p. 16) regarding participants', to each other, displayed mutual understanding of the interaction and their orientation to what

Heath and Luff (2000) call a "reciprocity of perspectives", which they base on what is available to them at their end of the connection.

4. eClassroom tandem as a research context

The data corpus in this article stems from a research project in Finland, eClassroom Tandem (2016), aimed at developing classroom tandem as a model for language learning and teaching for virtual learning environments, including real-time digitally mediated interaction. Finland is a bilingual country with two official national languages: Finnish and Swedish. All Finnish citizens have designated a linguistic affiliation, 'mother tongue', Finnish, Swedish, or some other language. Citizens with Finnish or Swedish as their mother tongue have legally guaranteed equal rights to use and get service in their native language (Boyd & Palviainen, 2015). Even though Finnish is the language of the majority (87.9% of the population), and Swedish that of a minority (5.2% of the population, Statistics Finland, 2018), both language groups are constitutionally guaranteed equal rights, even in regard to education.

The educational system in Finland builds on two parallel monolingual school systems for Finnish and Swedish speakers respectively, where both language groups study the other national language as an obligatory school subject: Swedish as a second national language in Finnish-medium schools and Finnish as a second national language in Swedish-medium schools (Boyd & Palviainen, 2015). The goals set in the curriculum are comparable, which makes the status of the two national languages quite balanced in the school system. However, the need for learning the other national language is often questioned in societal debate, especially among the Finnish majority. At the same time, the second national language instruction has been criticized for being too grammar-focused (Pörn & Norrman, 2011). There is a demand for a more communicative approach to language instruction in the second national language (Toropainen, 2010; Tuokko, 2009), and for more contact and cooperation between the language groups within the educational system. Regarding (second national) language instruction, the national core curriculum emphasizes authentic language use and language learning in cooperation with students from other language groups (Finnish National Agency for Education, 2014, 2015). During the past few years, there has been a growing interest in developing communicative models for language instruction, including authentic situations for language use and forums for cooperation between the language groups. One such model is tandem language learning, applied both in physical and virtual learning environments (Karjalainen, Pörn, Rusk, & Björkskog, 2013; Löf et al., 2016).

In Finland, face-to-face and virtual forms of classroom tandem have been developed as models for curriculum-based language instruction within second national language education (Hansell & Pörn, 2016). Due to the geographical distance between Finnish- and Swedish-speaking partner schools, the applied virtual eClassroom tandem model is being used to connect Finnish-speaking and Swedish-speaking students. The eClassroom tandem model employs virtual learning environments to establish contact between language groups and to create affordances for language learning in interaction. eClassroom tandem courses apply general tandem language learning features: two students with different L1s form a tandem dyad and learn each other's L1 in-and-through interaction in reciprocal cooperation (Brammerts, 2003; Karjalainen, 2011; Karjalainen et al., 2013; Löf et al., 2016). The partners in tandem dyads function, in turns, as an L2 learner, and as a model and resource in their L1. The students interact both through spoken (VME) and written language (shared documents, chats), and can use several platforms and media simultaneously. The challenges in developing the eClassroom tandem model involve issues dealing

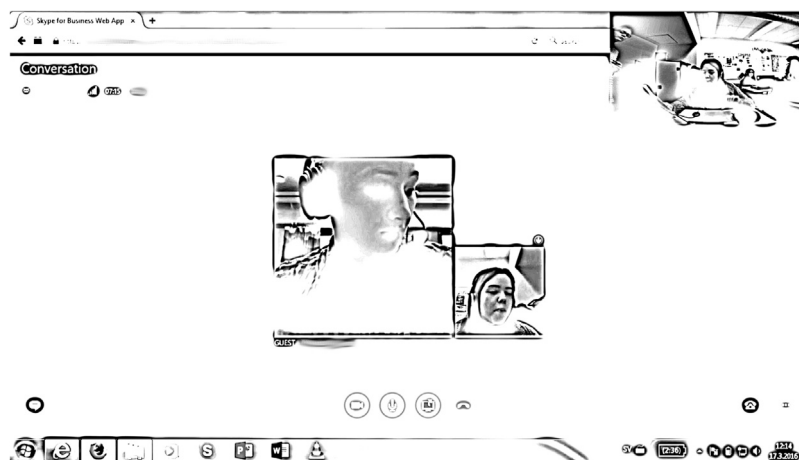


Fig. 1. Image of the data from one participant's perspective.

with technology, task design, and the cooperation between tandem partners in virtual environments. This article contributes to our understanding of situated interaction in VMEs in eClassroom tandem courses within L2 education and, more broadly, to the understanding of how the social interaction is organized in L2 VMEs where an omnipresent lag appears to be present.

5. Data collection and selection

The dataset of this article includes recordings of five students (three different pair constellations), 16 and 17 years of age, who participated in an eClassroom tandem course. The tandem lessons are part of the curriculum-based second national language course and tandem lessons comprise between two and six 40-minute classes. The data amounts to approximately 10 hours of recordings. The focus of the recordings was to capture the tandem dyads' naturally occurring video-mediated interaction.² The data for this article comprises a corpus of both screen recordings and camera recordings of both partners in non-shared physical locations. However, the data was, in post-production, synchronized into two split-screen videos; one from the perspective of the Finnish-speaking student and one from the perspective of the Swedish-speaking student (see Figure 1).

The video-mediated environment (VME) represents a “fractured” environment (Hjulstad, 2016; Luff et al., 2003). This article investigates participants' social practices for upholding intersubjectivity in “fractured” VMEs. In all the data, there seemed to be an omnipresent lag, which desynchronized the video from sound, creating a delay stretching from only a couple of tenths of a second up to several seconds. Sometimes there would even be a completely frozen connection and/or video or sound.

None of the phenomena and practices analyzed in this study were preconceived prior to data collection. Instead, they were, and became, emergent in the data as a result of repeated “unmotivated looking” (Schegloff, 1999; Seedhouse, 2004). Through this unmotivated looking, we found that there was a constant lag that seemed to interfere with the interaction and the turn-taking (as previous research has shown, e.g. Olbertz-Siitonen, 2015). Therefore, our initial point of interest was to identify situations in which participants were overtly coping with the delay.

The initial data selection included situations characterized by a participant explicitly displaying a problem in understanding

regarding the conversation, activity or assignment³; that is, situations in which there were problems in understanding the talk in the conversation. Within this vast body of situations, the data selection was focused to include situations in which at least part of the problem was due to a lag that delayed the incoming video and sound. These situations, 15 in total, comprised the data used in the analysis and discovery of how participants organize their social practices to cope with a delay in video and sound that seemed to be omnipresent, albeit to different degrees. The practices appear to be specific to VMEs, since the context requires that the participants use them to uphold intersubjectivity in that specific context. That is, a context where it is impossible to not encounter delay (to some degree), which differentiates it from face-to-face conversations or telephone conversations. The practices can be described as the “more subtle ways to deal with technological distortions” mentioned by Olbertz-Siitonen (2015, p. 227). Additionally, these social practices become clearly visible when employing the data collection method that has been used in this study; that is, analysing recordings from both sites. In other words, the focus is on how participants accommodate for the VME as an interactional context through their social practices.

The recordings are analyzed according to the aims of the article using a CA stance (Schegloff, 2007). CA transcripts are designed to include details of what is said and how it is said (pitch, volume, speed, and/or prosody, see Hepburn & Bolden, 2017). The transcription in this article builds on the most common method of transcription in CA, which is the Jefferson (2004) system.⁴ However, all situations are transcribed and analyzed from both students' perspectives. In other words, all situations include two transcripts of the same situations. This is done to better display and analyze the impact of the delay in the VMEs from both students' perspectives. Although both students are present in the same VME, this does not mean that the delay impacts their connections in the same way. One may experience more (or other forms of) delay than the other, without the other being aware of it. Hence, to better understand the actual events and social practices in the VMEs, we need to analyze and transcribe the situations from both perspectives.

A reliable hearing of the talk was ascertained by using the sound that the PC (the headphones and microphones used in the VME) picked up. If there were troubles hearing what they were saying, the external video recording was used in conjunction with the VME

² The eClassroom tandem course used Skype for Business and Fronter as virtual platforms to enable the mediated interaction.

³ When using the term *assignment*, we refer to a written assignment on a sheet of paper that the teacher handed out to the participants for them to complete.

⁴ The transcription system used in the article is based on the Jefferson (2004)

sound and video. All transcripts from the Finnish-speaking (L1 is Finnish) student's perspective are therefore marked with "FIN" and all transcripts from the Swedish-speaking (L1 is Swedish) student's perspective are marked with "SWE". After each turn in the transcripts, the turn number (T), current position/s (1–20) in a sequence of action (A–Z), and multimodal and/or nonverbal actions are provided in double parentheses.

6. Practices for coping with lag in L2 VMEs

Based on 15 situations in which the students encountered problems due to delay, we present four different practices that participants used to cope and to restore intersubjectivity. The excerpts include four of the focus students. Nevertheless, the selection of the four excerpts for closer analysis are representative of all five students. The excerpts suggest lag is an inextricable element in VMEs that affects turn-taking and turn design. Participants need to be attentive to, and adapt, their turn construction, turn-taking and

turn design to the omnipresent lag; that is, to the actual context of the non-shared space in the VME. Participants (in the studied VMEs) were able to take lag into account using social practices to uphold or restore the intersubjectivity.

6.1. Taking (in part) control of the conversation

Excerpt 1 is a situation that displays how participants' orientation to the context and assignment shapes their social practices in a way that helps participants to cope with the lag. It is also an example of how the tandem partners do not appear to orient to having a visual (video) connection. The gaze is often down, and they are reading, instead of looking up and employing the visual resource in their interaction. Ilona (Finnish L1) and Joel (Swedish L1) are supposed to do an assignment that enabled them to get to know each other by asking and answering questions regarding their skiing holiday, as well as other hobbies. In this half of the class, they are supposed to speak Finnish.

Excerpt 1-1 FIN		
01 I:	hei nyt kuul- näkyy [(.) nyt näkyy hey now I hea- see [now I see	((T1, A1, I gaze up points on screen, then gaze down)) ((J gaze up))
02 J:	[nii yea]	((T2, A2, J gaze up, I gaze down))
03	(0.4)	
04 I:	okei (.) onks [sulla tota:, [(.) toi lappu (0.3)] tää lappu okay do you ha ve u:m, [that paper this paper	((T3, B1, both read, gaze down on paper)) ((at the end of turn I lifts up paper))
05 J:	[joo yes] [tää verkko on taas this net is again]	((T4, A2 & 3, J gaze down))
06	(0.4)	
07 J:	ääöö uu::	((T5, C1, J gaze down, I gaze up))
08	(1.2)	
09	*nyt* (.) ototetaanki- ka- nää kysymykset nyt e:nnen (.) ää ennen kuin tää *now* let's ta- no- these questions now be:fore uu before this	((T6, D1, J gaze down, I gaze up))
10	verkko menne taas. net goes again.	((T6, D1, J gaze up, I gaze down))
Excerpt 1-1 SWE		
01 I:	hei nyt kuul- näkyy (.) nyt n- näkyy hey now I hea- see now s- see	((T1, A1, I points on screen, then gaze down, J gaze up))
02	(0.2)	
03 J:	j [oo,]	((T2, A2, both read, gaze down))
04 I:	y es, okei]	((T3, B1, both read, gaze down))
05	(0.3)	
06 J:	tää verkko on taas,= this net is again,	((T4, A2, both read, gaze down))
07 I:	=onks sulla tota: toi lappu do you have u:m that paper	((T5, B1, both gaze down))
08	(0.4)	
09 J:	öö:= uu:=	((T6, C1, both gaze down))
10 I:	=tää lappu =this paper	((T7, B1, I gaze up, J gaze down))
11	(0.9)	
12 J:	nyt (.) otetaank(i) tää kysymykset ny e:nnen (.) now let's take this questions now be:fore	((T8, D1, J gaze up, then down again, I gaze up)) ((I lifts paper up, J gaze down))
13	öö ennen kuin nyt tää verkko menee taas uu before then now this net goes again	((T8, D1, I gaze up, J gaze down))

system.	
(.)	a micropause less than 0.2 seconds
(0.5)	a silence indicated in tenths of seconds
[text]	overlapping talk or co-occurring embodied actions
text	stress or emphasis
TEXT	louder talk than normal
°text°	markedly quiet talk
:	prolongation/stretching of the prior sound
>text<	faster talk than normal
<text>	slower talk than normal
text-	cut-off or self-interrupted talk
((text))	non-verbal/embodied activity/transcriber's description of events
(text)	likely hearing of talk
(S1) / X	the identity of speaker is not clear
()	inaudible
=	talk/embodied activity latches on previous turn
?	rising intonation
.	falling intonation
,	continuing intonation
hh (hh)	hearable exhale
.hh (.hh)	hearable inhale
text	English translation of Finnish in italics
text	English translation of Swedish in bold font

Ilona and Joel are having technical issues and have not been able to start the assignment. The situation starts when they orient to the connection having become stable. The sequence initiating turns (FIN lines 1–2 & SWE lines 1) indicate that the participants have been waiting for the connection to become stable. The first turns indicate how differently the turns are positioned and designed for the two students (compare the FIN transcript to the SWE transcript, for example Joel's *joo* on SWE line 3 [after Ilona's initiating turn] is located on FIN line 5 in the middle of Ilona's turn). Ilona's turn on FIN line 4 and SWE lines 7 and 10 indicate that Ilona is orienting towards beginning the assignment (sequence C), whereas Joel is still talking about the connection being bad (sequence A, FIN line 5 & SWE line 5). This is also revealed by the participants' non-verbal practices. Joel does not acknowledge that Ilona is trying to show him the paper. Instead, he is orienting towards his own paper with assignments, which he is reading. Hence, sequence B does not receive uptake from Joel's part. Additionally, the showing of the paper is in different sequential positions in the two connections because of the delay (compare FIN line 4 with SWE line 12).

Excerpt 1-2 FIN

11 (0.3)
 12 I: joo ((T7, D2, J gaze up, I gaze down))
 yes
 13 (0.9)
 14 J: .hh öö: sit: (hh)öö:: ((T8, E1, both read, gaze down))
 uu: then: uu::
 15 (0.4)
 16 J: **keskustel-** .hh ((T9, E1, both read, gaze down))
 discus-
 17 (1.0)
 18 I: noni, [eli] meidän pitää alottaa tosta [ykköse(stä)] eli, ((T10, F1, both read, gaze down))
 right, [so] we're supposed to start from [number one] so,
 19 J: [okei ö:] [niin öö:] ((T11, E1 & T12, E1, I gaze down, J gaze up))
 [okay u:] [yea uu:.]
 20 (1.6) ((I gaze down, J gaze up))
 21 I: si [nä] aloitat kysymään ja minä vastaan ja sit toisinpäin ((T13, G1, both gaze up, I gesture towards J and back towards her))
 y [ou] begin asking and I answer and then the other way around
 22 J: [jo] ((T14, F2, both gaze up))
 [yes]
 23 (1.4) ((both gaze up))
 24 J: jo- (.) tottakai: öö no sit (.) ((T15, G2, both read, gaze down))
 ye- of course uu well then
 25 J: mitä teit hiihtolomallasi ((T16, H1, both read, gaze down))
 what did you do on your skiing holiday
 26 I: ö: no: mä olin eka kotona ((T17, H2, both gaze up))
 u: well first I was at home

Excerpt 1-2 SWE

14 (1.3)
 15 I: [joo] ((T9, D2, I gaze down, J gaze up))
 yes
 16 J: öö sit: (hh)öö: **keskustel-** ((T10, E1, both read, gaze down))
 uu then: uu: **discus-**
 17 (1.5)
 18 J: okei [öö] ((T11, E2, both read, gaze down))
 okay [uu]
 19 I: [noni] ((T12, E3, both read, gaze down))
 [right]
 20 (0.4)
 21 J: [nii öö] ((T13, E4, I gaze down, J gaze up))
 [yea uu]
 22 I: [meidän] pitää alottaa tosta ykköstehtävästä eli, ((T14, F1, I gaze down, J gaze up))
 [we are] supposed to start from that number one task so,
 23 (0.7)
 24 J: joo ((T15, F2, J gaze down))
 yes
 25 (0.4)
 26 I: siinä alotat kysymään ja, minä vastaan ja sit toisinpäin ((T16, F3, I gaze up, gesture towards J and back towards her, J gaze up))
 you begin asking and, I answer and then the other way around
 27 (0.4)
 28 J: jo (.) tottakai: öö no sit (.) ((T17, F4, both gaze down))
 yes of course uu well then
 29 (1.7) ((T18, G1, both gaze down))
 30 (1.7) ((both gaze up))
 31 I: öö no (.) mä olin eka kotona ((T19, G2, both gaze up))
 uu well I was first at home

The next part of the situation involves Ilona orienting to Joel's suggestion to go through the questions before the connection is lost again (FIN line 12 & SWE line 14). Both read the instructions on the assignment sheet (FIN lines 14–16 & SWE lines 16–21). Ilona has read them before Joel and states where they are supposed to start and what they are supposed to do (FIN lines 18–21 & SWE lines 19–26). In the FIN transcript, Joel's *okei* 'okay' and *niin* 'yea' appear to be confirmations to what Ilona is saying (FIN line 19). From Joel's perspective (including the non-verbal practices), however, his *okei* 'okay' and *nii* 'yea' turns would be better understood as indicating that he has finished reading and that he is ready to negotiate (SWE lines 18 & 21). Ilona orients to Joel by not aligning with her proposal as she provides further instructions on how they are supposed to divide the labour between themselves (FIN line 21 & SWE line 26). She emphasizes with hand gestures (FIN line 21 & SWE line 26). Joel aligns with this (FIN line 22 and 24 & SWE line 24 and 28) and asks the first question of the assignment on FIN lines 25 & SWE lines 29.

In this excerpt, the participants explicitly state that they want to get through the assignment since they do not trust that the connection will be stable for long. In the first part of the situation, Ilona is trying to get them started, but there is no uptake to her initiation from Joel, who is producing his own sequence initiation. The second part of the situation involves Ilona aligning with Joel's line of action and again taking control of the interaction by providing clear instructions regarding what they should do and how they should do it.

In our data, the TRPs in question-answer dialogues seem to be clearer cut and more easily recognizable and the participants wait for a longer time, thereby providing the co-participant time to respond. Additionally, it is also clearer who has the 'control' in question-answer sequences: "As long as one is in the position of doing the questions, then in part they have control of the conversation." (Sacks, 1995, p. 54) The problems concerning lag and interaction in VMEs in our data appear to be more usual in situations where participants need to, in concert, figure out how they

are supposed to do the task at hand; that is, in situations where the roles are not as clear cut as in the closed dialogues. In the data, participants appear to be orienting to the L1 speakers who are managing the activities (see Rusk, Sahlström, & Pörn, 2017 regarding this orientation in Classroom tandem). In Excerpt 1, it is not Ilona who is in the position of doing the questions, but she is still oriented to providing instructions on how to do the task. This indicates that she, as an L1 speaker, appears to be oriented to as the one managing the activities with regard to the social organization of the task. Moreover, she appears to also be oriented to as the speaker with the greater language knowledge. One indication of this is that Ilona has read through and understood the assignment long before Joel. Ilona's subtle interactional move towards taking control and providing clear instructions appears to help in coping with the delay. Doing assignments in which the roles are clearly defined and explicitly negotiating who does what

in the interaction appears to help the students to cope with the delay.

6.2. Keeping the conversation alive

Excerpt 2 shows participants aligning with and agreeing to put the assignment on hold. But they keep the conversation going with short turns that relate to the connection being bad and how they, at their end of the connection, experience the delay. That is, they do not completely go silent while waiting for the connection to start working again. They display to their co-participant that they are still there and available for conversation. They also, more extensively, use the video feed as a resource for checking the connection.

Excerpt 2-1 FIN

01 S: ö:: u::		((T1, A1, both read, gaze down on paper))
02 (1.3)		
03 S: ö:::(h)? u::: ?		((T2, A2, both read, gaze down on paper))
04 (0.7)		
05 S: mitäs nyt tapahtuu what's now happening		((T3, B1, both read, gaze down on paper))
06 (0.7)		
07 S: .hh		
08 (0.9)		
09 S: ai pitää, (0.5) (ö-) sanoo toi sana niinku ruotsiks mikä oh you gotta, (u-) say that word like in swedish which tohon tulis would be there		((T4, B2, both read, gaze down on paper))
10		
11 T: [tääh (o) ehkä:: >ruotsiks< this (is) maybe:: >in swedish<		((T5, B3, both read, gaze down on paper)) ((skype video clearly lags))
12 (1.3)		
13 S: <j:a::,> <y:ea::,>		((T6, B4, both read, gaze down on paper))
14 (0.3)		
15 T: joo. yes.		((T7, B5, both read, gaze down on paper))

Excerpt 2-1 SWE

01 S: ö:: u::		((T1, A1, both read, gaze down on paper))
02 (1.6)		
03 S: ö:::(h)? u::: ?		((T2, A2, both read, gaze down on paper))
04 (0.4)		
05 S: mitäs- (.) ny- (.) tapah- what- no- happ-		((T3, B1, both read, gaze down on paper))
06 (0.9)		
07 T: >tää=o< ehk [ä:: ruotsiks >this=is< mayb e:: in swedish		((T4, B2, both read, gaze down on paper))
08 S: ai pitää (0.4) oh you gotta		((T5, B3, both read, gaze down on paper))
09 sanoo toi sana niinku ruotsiks mikä tohon tulis say that word like in swedish which would be there		((T5, B3, both read, gaze down on paper))
10 (0.8)		((S gaze up and then down))
11 T: jo: ye:s		((T6, B4, both read, gaze down on paper))
12 (1.4)		
13 S: ja::, yea::,		((T7, B5, both read, gaze down on paper))

Saara (Finnish L1) and Thomas (Swedish L1) are supposed to do an assignment that concerns Saara translating Finnish sentences into Swedish. They are supposed to speak Finnish to help Saara

translate the sentences into Swedish. Before the first turn of this situation, they have completed one assignment. Saara reads the next assignment and at the same time, she indicates that she has trouble knowing how to translate the first sentence (FIN lines 1–9 & SWE lines 1–9). Already in these first turns, the lag is apparent. Saara's turns are cut off and delayed in Thomas's connection (SWE lines 1–9), and Thomas's suggestion about how to approach the assignment is delayed in Saara's connection (FIN line 11 & SWE lines 7). Thomas's turn is in the sequential position B2 in his connection, whereas in Saara's, it is in the sequential position B3. Both Saara (FIN lines 9–10 & SWE lines 8–9) and Thomas (FIN line 11 & SWE line 7) express the same understanding of the assignment. Although turns are delayed, they reach an agreement and move on (FIN lines

13–15 & SWE lines 10–13). None of the participants lift their gaze to use the video feed as a resource in this first part of the situation. Both look down on the assignment paper.

Excerpt 2-2 FIN

16 (1.7)
 17 S: (hh)no: (0.3) mäen ainakaan tiiä tota ekaa. ((T8, C1, S gaze up and then down, T gaze down))
we:ll I don't at least know that first one.
 18 (5.6) ((T gaze up and Skype video freezes))
 19 S: mikä o aine ((T9, C2, gaze up))
what is subject
 20 (5.8) ((S gaze up at frozen video, then around))
 21 S: **tää lagas*** ((T10, D1, S talking to neighbor))
this lagged
 22 (2.0) ((video still frozen))
 23 T: >>menikö tää<< ((T11, E1, video still frozen, S gaze up))
 >>did this go<<
 24 (1.9)
 25 S: päätii: ((T12, D2, gaze down on paper))
laggi::ng
 26 (0.9)
 27 T: netti nyt tota(h) ((T13, E1, video still frozen))
the net now like
 28 (0.9)
 29 S: ai netti on jumi:ssa ((T14, F1, speaking to man who checks cables))
oh the net is stu:ck
 30 (5.4) ((T15, C3, video still frozen, S looks around))
 31 T: >>eikö oo<< (.) ö- ämne.
 >>is it not<< u- subject.
 32 (2.9) ((T16, G1, gaze down on paper, video still frozen))
 33 S: oota tää päät:iii:
wait this la:gs:

Excerpt 2-2 SWE

14 (1.5)
 15 S: .h @(h)no: (.) mäen- ainakan- @ ((T8, C1, T gaze down, video freezes))
@ we:ll I don- at leas- @
 16 (1.1) ((T gaze up, video frozen))
 17 S: @aika(h)@ ((T8, C1, T gaze up, video frozen))
@lea (h)@
 18 (5.5) ((T gaze up, video frozen))
 19 T: ni: mikä toi on netti nyt tota ((T9, D1, T gaze up, video frozen))
yea: what is that net now like
 20 (0.5)
 21 S: mikä o aine ((T10, C3, T gaze up, video frozen))
what is subject
 22 (0.8) ((T gaze up, video frozen))
 23 T: ninku:, ((T11, C4, T gaze up, video frozen))
li:ke,
 24 (0.4) ((T gaze up, video frozen))
 25 T: ö- ämne ((T12, C4, T gaze up, video frozen))
u- subject
 26 (13.7) ((T clicks on connection icon in Skype))
 27 S: päätii::, ((T gaze up, video frozen))
laggi::ng,
 28 (5.4) ((T gaze up, S gaze down, video freezes))
 29 S: ai net- ((T14, F1, T gaze up, S talks to person checking))
oh the n-
 30 (1.4) ((cables))
 31 S: ti=o:(n) jumi:ssa ((T14, F1, video still bad, T gaze up, S gaze up))
et=i:(s) stu:ck

Saara's next turns are cut off and delayed (compare FIN line 17 to SWE lines 15–17), and Thomas' turns become hard to hear. Some turns are cut out (compare SWE line 19 to FIN line 27). When reading the transcripts, they consist of long pauses (FIN lines 18, 20, 30 & SWE lines 18, 26, 28) and first pair parts that are not responded to in a sequentially salient position because of delay (FIN line 19 & SWE line 21 is responded to on FIN line 31 & SWE line 25).

Saara appears to notice the delay on FIN line 20 as she looks at the frozen video and, in the next turn, on FIN line 21, turns to a peer sitting next to her, at another computer, and whispers that her connection is lagging. The video in Saara's connection is frozen throughout the entire excerpt (FIN 2-2). Thomas seems to notice the delay on SWE line 16, as he looks at the screen when the video is frozen. On SWE line 19 he asks Saara if the connection is bad. The

technical problems are also audible in that Saara's voice is distorted in Thomas's connection. Saara attempts to inform Thomas that the connection is lagging on FIN line 25 & SWE line 27. On FIN line 29 Saara asks a teacher who is checking the cables if the connection is frozen. Saara's question regarding *ämne* 'subject' is delayed and Thomas answers it on SWE line 25. Saara receives this answer on FIN line 31, to which she responds that he should wait, because there is delay (FIN line 33). Saara explicitly puts the assignment on hold, because there is a technical problem that makes it difficult for them to interact. But this turn is completely cut out from Thomas's connection. In this excerpt, both participants are actively looking at the screen, much more than in other situations. One reason may be that they are looking for when the video starts working again, and that the sound probably starts working then as well.

Excerpt 2-3 FIN

34 (9.4) ((connection drops))
 35 S: noNI ((T17, G2, both gaze up, video works))
 nOW
 36 (1.6)
 37 S: .hh
 38 (0.6)
 39 S: nyt toimii ((T18, G3, both read, gaze down on paper))
 now it works
 40 (0.3)
 41 T: >aa=oke(i)< ((T19, G4, both read, gaze down on paper))
 >oh=oka(y)<
 42 (1.6)
 43 S: nii, ((T20, C4, both read, gaze down on paper))
 yea,
 44 (0.6)
 45 S: en tiiä mikä on aineita ((T21, C4, both read, gaze down on paper))
 I don't know what is subjects video freezes again))
 46 (8.9) ((S looks around, video frozen))
 47 T: aineita, ((T22, C5, video works, both gaze up))
 subjects,
 48 (0.3)
 49 T: se on sitte ämne ((T22, C6, both gaze up))
 that is then **subject**
 50 (0.4)
 51 S: aa ((T22, C7, S gaze down, T gaze up))
 o:h
 52 (0.6)
 53 S: vilka ämne har du i

de:n
have
Ämne
Subject

 hä:r in thi:s ((T23, H1, S gaze down, reads, T gaze up))
 which subject do you
 54 T: ((T24, C8, S gaze down, reads, T gaze up))
 55 (0.8)
 56 S: <perio:de:n:,> ((T25, H1, both read, gaze down on paper))
 <seme:ste:r:,>
 57 (2.0) ((T gaze up, S gaze down))
 58 T: ö: jag har finska (0.6) matematik ((T26, H2, both gaze down))
 u: I have finnish math

Excerpt 2-3 SWE

32 (9.4) ((video works, both gaze up))
 33 S: >noNI< ((T15, G1, both gaze up))
 >nOW<
 34 (0.4)
 35 T: a:=okej ((T16, F2, both gaze down))
 oh:=okay
 36 (0.7)
 37 S: .h
 38 (0.5)
 39 S: @nyt=toemii@ ((T17, G2, both read, gaze down))
 @now=works@
 40 (2.7)
 41 S: nii, ((T18, C5, both read, gaze down))
 yea,
 42 (0.6)
 43 S: e- ((T19, C5, video bad, freezes, T gaze up))
 a-
 44 (0.9)
 45 S: en- ((T20, C5, video bad, freezes, T gaze up))
 I do-
 46 (0.8)
 47 S: ntiia >mikä o aineita.< ((T21, C5, video bad, freezes, T gaze up, S gaze up))
 nt know >what is subjects.<
 48 (1.9) ((video frozen, T gaze down))
 49 T: aineita, ((T22, C6, both gaze up))
 subjects,
 50 (.)
 51 T: se on sitte ämne ((T23, C6, both gaze up))
 that is then **subject**
 52 (3.2)
 53 T: ämne= ((T24, C7, video bad, freezes, T gaze up))
subject=
 54 S: =aa ((T25, C8, both gaze down, read))
 =oh
 55 (0.5)
 56 S: >vilka ämne har du i den hä:r< ((T26, H1, both read, gaze down))
 >which subject you have in thi:s<
 57 (0.7)
 58 S: <perio:de:n:,> .hh ((T27, H1, both read, gaze down))
 <seme:ste:r:,>
 59 (0.7)
 60 T: ö: jag har finska (.) matematik ((T28, H2, S gaze down, T gaze up))
 u: I have finnish math

On FIN line 35 & SWE line 33, Saara orients to the connection being up and running again. The video seems to be working after her connection was dropped for a couple of seconds. However, there is still some delay on Thomas's connection (SWE line 39), as Saara picks up the conversation regarding what the Swedish word *ämne* 'subject' means (FIN lines 43–45 & SWE lines 41–47). Both participants start looking at the paper and look down (FIN lines 39–45 & SWE lines 35–41), after Saara has claimed that the connection seems to be working again. The connections are still not working properly, which is displayed by how Saara's turn on FIN line 45 is heard in Thomas's connection on SWE lines 43–47. Moreover, Saara's video freezes after she has asked that question, which leads to a long pause (FIN line 46) before Thomas's answer is delivered to her (FIN lines 47–49 & SWE lines 49–51). Thomas repeats the trouble word and provides the answer by translating the word into Finnish (FIN lines 47–49 & SWE lines 49–51). He also adds a turn in which he emphasizes that the word starts with the letter *ä* (SWE line 53), but this turn is delayed (FIN line 54) in Saara's connection and does not get any explicit uptake. However, Saara appears to have understood what *ämne* 'subject' is as she expresses a change-of-state token (FIN line 51 & SWE line 54, Heritage, 1984), which displays that she now understands the word in the specific context and situation. She then continues the assignment by translating the sentence into Swedish and using the word *ämne* 'subject' in it (FIN line 53–56 & SWE lines 56–58). Thomas orients to this by providing an answer (FIN line 58 & SWE line 60).

This situation is an example of how participants, in our data, put the assignment on hold to wait out the worst connection problems. However, they keep the conversation alive to indicate that

they are still waiting for the connection to get better and to test the connection. During this, they look at the screen often, compared to when they orient towards the connection being good. In our data, it seems as if participants mostly look up at the screen when there is trouble with the connection. When they orient towards the connection being good, they look down at the paper with the assignments. Excerpt 2 is also an example of how they are goal-oriented, as there is not much additional talk, after the delay, before moving on with the assignment and with the sequence that got disturbed and which they did not close. This can be related to an orientation to a presupposed common frame of reference that Heath and Luff (2000) mention. Participants, in our data, use interactional resources to indicate a presence and to get back to business as soon as the connection allows it. They do not attempt to do the assignment, nor do they open up new sequences when there are problems in the connection.

6.3. Doing several restarts

Excerpt 3 exemplifies how a participant uses several restarts to indicate that they have self-selected as next speaker even though the delay caused their turn to be too late to smoothly fit in the turn-taking of the current speaker. Saara (Finnish L1) and Thomas (Swedish L1) are doing an assignment in which they read questions or statements and provide an answer or choose the alternative that best represents what they like or what they think. They are supposed to use Swedish, but when they are discussing how to do the assignment, they use Finnish.

Excerpt 3 FIN

01 T: mm (hh)	((T1, A1, reading, gaze down on paper))
02 (0.5)	
03 S: sanonko minä vaan kaikki do I just say them all	((T2, B1, reading, gaze down on paper))
04 (1.5)	
05 T: joo sano vaa(n). yes just say	((T3, B2, reading, gaze down on paper))
06 (0.4)	
07 S: jae [::(r)]	((T4, C1, reading, gaze down on paper))
I a [::(m)]	
08 T: [>a v- sanonko- m-< >u w- do I sa-<	((T5, D3, gaze up))
09 (0.6)	
10 S: hä huh	((T6, D4, gaze up))
11 (0.3)	
12 T: tai sanonko mä- m- (.) tai sanonko mä (mykye) or do I- s- or do I say ()	((T7, D5, gaze up and then down on paper))
13 (0.3)	
14 S: no: sanotaa vaa vuorotelle we:ll let's just say in turns	((T8, D6, gaze up, hand-gesture, gaze down))
15 (1.0)	
16 T: aa=okei oh=okay	((T9, D7, nods with gaze down on paper))
17 (0.5)	
18 T: ä: jag är arton år gammal a:nd I am eighteen years old	((T10, E1, gaze up at the end of turn))

Excerpt 3 SWE

01 S:	sanonko minä vaan kaikki do I just say them all	((T1, A1, reading, gaze down on paper))					
02	(0.3)						
03 T:	jo: sano vaan. ye:s just say.	((T2, A2, reading, gaze down on paper))					
04	(0.8)						
05 T:	>e v- sanon >e w- do I s	((T3, B1, gaze up))					
06 S:	<table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">ko<</td> <td rowspan="4" style="padding-left: 5px;">e:::(r)</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">ay<</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">jä</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">I</td> </tr> </table>	ko<	e:::(r)	ay<	jä	I	((T4, C1, reading, gaze down on paper))
ko<	e:::(r)						
ay<							
jä							
I							
07	(0.3)						
08 T:	tai sanonko or do I	(.) tai sanonko mä (mykyä) or do I say()					
09 S:	<table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">m-</td> <td rowspan="4" style="padding-left: 5px;">((T5, B2, gaze up and down at the end of turn))</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">sa-</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">hä</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">huh</td> </tr> </table>	m-	((T5, B2, gaze up and down at the end of turn))	sa-	hä	huh	((T6, B3, gaze up))
m-	((T5, B2, gaze up and down at the end of turn))						
sa-							
hä							
huh							
10	(1.2)						
11 S:	no: sanotaa vaa vuorotelle we:ll let's just say in turns	((T7, B4, gaze up, hand-gesture, gaze down))					
12 T:	a=okei oh=okay	((T8, B5, nods with gaze down on paper))					
13	(0.4)						
14 T:	å: jag är arton år gammal a:nd I am eighteen years old	((T9, D1, gaze up at the end of turn))					

The situation starts with Saara asking Thomas how they should organize the talk (FIN line 3 & SWE line 1). Thomas agrees with her and aligns with Saara's suggestion (FIN line 5 & SWE line 3). However, as soon as Saara starts her next turn (in the FIN transcript, but not in the SWE transcript), aligning with the suggestion, Thomas attempts to repair his previous turn and overlaps Saara's turn (FIN line 8 & SWE line 5). Thomas's turn is well within the TRP in his own end of the connection (SWE line 5). However, in Saara's end of the connection, his turn is late (FIN lines 7–8), so she has already started answering the questions in the assignment. Saara cuts off her turn and initiates repair after a pause (FIN lines 8–10). In Saara's end, the sequential organization is clear. There is a cut off (FIN line 8), a pause (FIN line 9), and a repair initiation (FIN line 10). Similarly, in Thomas's connection, his practices are sequentially organized in an orderly fashion. He self-selects as next speaker before Saara has taken the turn (SWE line 5), he cuts off his turn when he orients to Saara overlapping (SWE line 5), he self-selects again as next speaker during the pause (SWE lines 7–8) and restarts his previous turn. He cuts off to hear Saara's turn (SWE lines 8 & 9), orients to her repair initiation, and restarts and completes his initial turn (SWE line 8).

This is an example of how, in our data, it seems that delay, which organizes the turns differently in the two connections, requires more interactional work by the participants. Both participants act according to the sequential organization that is available to them. Thomas orients to the situation as one in which he must do several restarts to be able to take the turn (SWE lines 5–8). What is also apparent, as in the data, is that the participants lift their gaze when these timing problems appear. The participants seem to be looking to the video for help in maintaining the intersubjectivity

and meaning-making and to see if the video has frozen; that is, to see if the connection has gone completely bad. However, they do not appear to use the visual resource as an additional resource for social actions or practices.

The delay is observable in the pause between Thomas's turn and Saara's response. The pause is 0.3 seconds and 1.2 seconds respectively (FIN line 13 & SWE line 10). After hearing Thomas's turn, Saara suggests that they take turns (FIN line 14 & SWE line 11). Thomas aligns with that response and they continue the assignment. The situation in excerpt 3 shows how participants can use an interactional resource, such as restarts, to anticipate the TRP on the basis of what is available to them of the unfolding interaction in the context of a VME that delays the turns-at-talk. It seems, in our data, that the VME would require participants to divert from the finely tuned transition from one speaker to another and accept that they need to clearly indicate TRPs (use longer pauses in intended TRPs) and self-selection as next speaker (several restarts).

6.4. Context-specific L1 sensitivity to turn-taking

Excerpt 4 is an example of how the L1 speaker may orient to the situation as one in which the context of eClassroom tandem forms the practices in that the L1 speaker displays a sensitivity to the L2 speaker's turn-taking (similar to how L1 speakers in Classroom tandem display a sensitivity to the L2 speakers' epistemic stances, see Rusk, 2016; Rusk et al., 2017). The excerpt displays how the delay in the connection makes it hard to anticipate the TRPs based on what is available to the participants in the unfolding interaction in the VME.

Excerpt 4-1 FIN

01 S:	sitte: musiikki., the:n music.,	((T1, A1, both read, gaze down on paper))					
02	(2.1)						
03 T:	m::=joo. m::=yes.	((T2, A2, both read, gaze down on paper))					
04	(1.2)						
05 T:	kylä tää sama, yes this same,	((T3, A3, both read, gaze down on paper))					
06	(1.0)						
07 S:	ö:: (0.3) po u:: po	((T4, B1, both read, gaze down on paper))					
08 T:	<table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">p:,</td> <td rowspan="4" style="padding-left: 5px;">oon ni-<</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">p:,</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">>mä</td> </tr> <tr> <td style="border-right: 1px solid black; padding-right: 5px;">>I</td> </tr> </table>	p:,	oon ni-<	p:,	>mä	>I	((T5, C1, both gaze down on paper))
p:,	oon ni-<						
p:,							
>mä							
>I							

Excerpt 4-1 SWE

01 S: sitte: musiikki, ((T1, A1, both read, gaze down on paper))
 the:n music,
 02 (1.1)
 03 T: m::=:jo: ((T2, A2, both read, gaze down on paper))
 m::=:ye:s
 04 (1.2)
 05 T: kylä tää sam(a) ((T3, A3, both read, gaze down on paper))
 yes this same
 06 (1.8)
 07 S: ö: [: (0.4) pop] ((T4, B1, both read, gaze down on paper))
 u: [: pop]
 08 T: [mä oon niin sur- ((T5, C1, both gaze down on paper))
 I am so ba-

Saara (Finnish L1) and Thomas (Swedish L1) are doing an assignment in which they read questions or statements and choose the alternative that best represents what they like. On FIN lines 1–5 and SWE lines 1–5 Saara chooses music, and Thomas agrees and aligns with that choice. He also upgrades his first assessment ‘m yes’ to ‘yes this same’ on FIN line 5 & SWE line 5. The following turns (FIN lines 7–8 & SWE lines 7–8) become problematic because of the delay in the connection, which seems to be approximately 0.8 seconds when looking at the pause on FIN & SWE line 6. In other words, the situation is similar to Excerpt 3. On Saara’s end, she finishes her continuation/thinking marker and utters which alternative she would pick. Thomas, on the other hand, launches an insert sequence (FIN line 8 & SWE line 8) regarding his previous choice. This insert sequence, then, is sequentially positioned differently in the two connections. Thomas has, as he understands the timing and situation at his end, inserted it in a more suitable TRP; that is, the 0.4 second pause on SWE line 7. However, in Saara’s connection the insert sequence overlaps the final turn constructional units of her answer (FIN line 7).

Excerpt 4-2 FIN

09 (0.8)
 10 S: >aha (.) mitä s- mitä sä olit sanomas< ((T6, C2, both gaze down))
 >uhu what w- what were you going to say<
 11 (0.5)
 12 T: mä- mä- mä oon niin surkea niinku kuvataidees et, ((T7, C3, both gaze down on paper))
 I- I- I am so bad like in arts and crafts so,
 13 (0.4)
 14 S: nii(h)i(h)i .hh ((T8, C4, S gaze up and then back down))
 yea e e ((T gaze down))
 15 (1.3)

Excerpt 4-2 SWE

09 (1.4)
 10 S: a(ha) (.) >mitä [s- mitä sä olit sanomas< ((T6, C2, both gaze down))
 u(hu) >what [w- what were you going to say<
 11 T: [mä- mä- mä oon ((T7, C3, both gaze down on paper))
 I- I- I am]
 12 niin surkea niinku kuvataidees et ((T7, C3, both gaze down on paper))
 so bad like in arts and crafts so
 13 (1.3)
 14 S: ni(h)i(h)i (.) .hh ((T7, C4, S gaze up and then back down))
 ye e a ((T gaze down))
 15 (1.5)

Thomas notices that he is overlapping Saara, as she is saying *pop* in his connection (SWE line 7) and cuts off his turn. Next, there is a long pause (different length in the different connections, FIN line 9 & SWE line 9), after which, Saara displays sensitivity to him trying to take the next turn by initiating an other-initiated repair (FIN line 10 & SWE line 10). Thomas orients to this and repeats what he was trying to say. He uses several restarts, because he starts constructing his turn in the middle of Saara’s turn (SWE line 11). However, in Saara’s connection there is a 0.5 second pause before Thomas’s answer is heard (FIN line 12). The insert sequence is closed as Saara orients to, and acknowledges, his turn and treats it as funny and laughable (FIN line 14 & SWE line 13). The delay is also very noticeable when comparing the pause between Thomas’s turn and Saara’s acknowledgement (0.4 seconds compared to 1.3 seconds on FIN & SWE line 13).

Excerpt 4 exemplifies what we have found in our data corpus: an increased, explicitly uttered, sensitivity by the L1 speaker towards the L2 speaker. Saara displays an explicit sensitivity towards Thomas when she, as the current speaker, allocates the turn to him with a ‘considerate’ repair initiation. She notices him wanting to say something, ‘aha’, and initiates repair with a category-specific interrogative. In Saara’s connection, the sequential organization is ‘cleaner’, whereas in Thomas’s connection he overlaps Saara’s repair initiation and he seems to orient towards him having to employ several restarts (as was the case in excerpt 3).

In eClassroom tandem, the L2 speaker is supposed to use his/her L2 which, in itself, may be challenging. However, in addition to this, the social organization of the interaction (in which you must use your L2), the turn-taking and anticipation of TRPs, is made more challenging by the delay in the interaction which, in turn, is caused by the internet connection. The oriented-to L1 speakers, in our data, appear to orient to the L2 speakers as needing extra attention and support (similar as in Classroom tandem, see [Rusk](#)

[et al., 2017](#)). Excerpt 4 is a task in which they are supposed to use Finnish and the assignment text is in Finnish. Saara (Finnish L1) is the one who is controlling the organization of the task, as she produces the first answers (FIN & SWE lines 1 & 7). Saara (L1 speaker) is oriented to as the one allocating turns and leading the conversation, and she displays explicitly a sensitivity to Thomas (L2 speaker) and gives him the floor ([Sacks, 1995](#), p. 54 re control and questions). This orientation, which is seen in the dataset and in Excerpt 1, helps them cope with the delay because the participants orient to these roles in the interaction. This is also an interactional practice that is fruitful for the eClassroom tandem concept, since the idea is that the L2 speakers are supposed to use and produce talk (and text) in their L2 as much as possible to learn the L2.

Discussion

In this article, we have analyzed L2 interaction in VMEs in an eClassroom tandem context. The purpose has been to bridge the knowledge gap regarding a need for an enhanced understanding of both the contextual and the interactional dimensions of language use as it is taking place in VMEs (Tudini & Liddicoat, 2017). Technology and digitalization are ubiquitous, even in the field of education. The use of technology involves the use of non-shared spaces and contexts that are constructed as such, with their own possibilities and challenges. The context in which people interact has a huge impact on what interactional resources are available, as well as how the “fractured” environment affects the interaction (Hjulstad, 2016; Luff et al., 2003). Some problems, such as intermittent delays or cuts in the connection, can be compared to face-to-face interaction, where there is a lot of background noise or other reasons which make parts of the talk inaudible. However, the delay that appears to be present throughout the VMEs in the studied data is not present in face-to-face interactions, and therefore it is important to study how participants cope with this. We have recorded both the screens and the activities around the screens from both participants’ perspectives to be able to analyze the interaction in these non-shared spaces from a CA perspective (Olbertz-Siitonen, 2015). Thus, the understanding and micro-analysis of both participants’ situated actions is greatly improved, and this is crucial for a study that focuses on the impact that delay has on the social interaction.

The results of this study display how participants can uphold intersubjectivity and the meaning-making machinery of turn-taking and sequence organization in these VMEs, even when there is an omnipresent lag. This seems to be because of their orientation to a presupposed common frame of reference (Heath & Luff, 2000). Regarding the eClassroom tandem context, the determined and oriented-to roles (L1 speaker and L2 speaker) of the participants appear to be of importance for upholding the mutual understanding, as well as the instructions they receive on how to cooperate and support each other (Löf et al., 2016).

Additionally, the goal of several of the tasks in the studied lessons was not to provide open discussions. The tasks were closed dialogues with one person asking questions and the other providing answers. Although these tasks may not be authentic (Elo & Pörn, 2018) and may even hinder participants from using their respective L2s, the closed dialogues appear to create a context in which lag is less of a problem. In tasks where the roles are clear (see Hansell & Pörn, 2016; Rusk et al., 2017), the turn-taking system is not as open as in a ‘normal’ dialogue. The TRPs in the question-answer dialogues are clearer and more easily recognizable. As a result, the participants wait for a longer time and give the other participant time to respond. Thus, doing tasks in which the roles are clearly defined and explicitly negotiated helps the participants to cope with the delay, and the L1 speaker appears to be oriented to as the one who is managing the performance of the task.

It also seems that participants scarcely use the possibility of interacting through embodied practices. This result contradicts previous studies on VMEs (Nguyen, 2017) that indicate that participants use the affordances that the different modes create. However, in our data, the participants often focus on the assignment papers, and if they look at the screen, they seldom use gestures as resources. The video feed seems to be used as an indicator for how well the connection works.

The results of this study contribute to practical applications about task development within L2 education in general, and within tandem pedagogy more particularly. When planning the use of VMEs for L2 learning, results, such as the ones in this article, are useful for making participants of VMEs aware of these issues and how delay impacts the basic systematics of turn-taking. It also includes

ideas on how to manage delays and still uphold intersubjectivity. For example, VMEs require participants to divert from the finely tuned transition from one speaker to another and accept that they need to clearly indicate where there are TRPs (longer pauses in intended TRPs) and clearly indicate when they self-select as next speaker (several restarts). This is especially important when considering the use of VMEs for L2 learning and education.

The rapid growth of digitalization implies that more L2 learning will probably be done in-and-through VMEs, so we need to study the VMEs as contexts that are fractured and as contexts in their own right, which require participants to accommodate their social practices to fit in the context of the VMEs. VMEs are part of the L2 education and the classrooms, and the L2 educational community puts a lot of trust in technology as a means to create opportunities for authentic language use (Thorne, 2008). However, in order to get a deeper understanding of the opportunities offered by VMEs, there is need for more knowledge about participants’ actual social actions in the video-mediated interaction. We believe that our study, which focuses on delay in L2 interaction in VMEs, adds an important perspective to the on-going discussion on L2 pedagogy and tandem pedagogy in the context of virtual learning environments, simultaneously pointing towards a relevant area for future research.

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