Making sense of interactional trouble through mobile-supported sharing activities
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1 Introduction

This chapter examines how second language speakers (learners of Finnish) use a mobile phone as a resource to focus on and make sense of moments of interactional trouble that they have experienced in their own prior interactions outside the classroom, thus making such moments available as the focus of joint learning activity. The analysis builds on conversation analytic research on L2 learning as a situated social activity, which has demonstrated how second language users create moments of learning while maintaining or restoring intersubjectivity (see e.g. Gardner & Wagner 2004, Hall, Hellermann & Pekarek Doehler 2011, Lilja 2014, Wagner 2015, Eskildsen & Theodorsdottir 2017). By establishing and sustaining a focus on some aspect of L2 use in their interactions, second language speakers work towards developing the linguistic and interactional resources that they need to be able to accomplish meaningful social actions in the second language. In this sense, L2 learning is best captured in the notion of interactional competence (Hall et al. 2011; Pekarek Doehler & Pochon Berger 2015). The development of L2 interactional competence involves building a repertoire of interactional practices to perform recognizable actions in a context-sensitive way in different language use situations. In order to adopt specific practices as part of their interactional repertoire, L2 speakers need to apply and develop their ability to analyse how utterances can be heard and understood in their interactional context.

Focusing on a single case drawn from two complementary data sets – the students’ self-recorded service interactions and classroom discussions in which the participants share their videos and discuss them – this chapter analyses the interactional methods that the participants employ to identify a moment of trouble in a prior interaction, create shared access to the event by using the mobile phone and then jointly scrutinize how the problematic interactional moment occurred and unfolded. The analysis shows that situated use of the mobile phone augments the resources available for participants in collectively analysing the moment of trouble and building joint learning activity. The phone allows them to provide
shared epistemic access to a referent that would be otherwise inaccessible and thereby provides opportunities for collaborative action (see also Raclaw, Robles & DiDomenico 2016). The findings contribute to the study of L2 learners’ interactional competences as co-constructed and sensitive to the contingencies and material ecologies of different types of social activities (see e.g. Hall, Hellermann & Pekarek Doehler 2011, Pekarek Doehler & Berger 2015). They also shed new light on the interconnectedness of different learning contexts inside and outside classrooms.

The data come from experientially based pedagogical activities that involve participation in real life service encounters as part of a research-based pedagogical initiative that aimed to connect classroom learning with students’ experiences of interactions in their daily life (Piirainen-Marsh & Lilja, 2018, Lilja et al. 2018, see also Wagner 2015). The data was collected during courses of Finnish as a second language aimed for novice learners and focusing on conversational language use. The course curriculum was based on experiential pedagogy and recent pedagogical initiatives focusing on developing infrastructure for L2 learning outside the classroom (Clark & Lindemalm 2011, Wagner 2015, see also Lilja & Piirainen-Marsh, 2018). The teachers, in collaboration with the researchers, designed learning activities that centered on students’ experiences outside the classroom and reflective peer discussions on these in the classroom. The students prepared themselves for everyday service encounters “in-the-wild”¹ in the classroom and then participated in the encounters in pairs and video-recorded them. The use of a mobile device was part of the task design: mobile phones were used by students for the purpose of documenting and retrieving their interactions outside the classroom so that they could be discussed and analysed in de-briefing discussions in the classroom.

The data for this paper is drawn from the complementary data sets of 1) the actual service encounters (41 encounters in total) and of 2) the retrospective discussions about these encounters back in the classroom (c. 21 hours in total). The analysis focuses on an extended case in which the students report problems of understanding related to interpreting the responsive behavior of the interlocutor. They use the de-briefing discussion as an occasion to

¹ We use the notion of ‘the wild’ (Hutchins 1995) as a metaphor to refer to the complex and contingent nature of L2 speakers’ social interactions outside the classroom (see also Wagner 2015, Hellermann et al. 2018).
analyse and develop a new understanding of the prior interaction exploiting the specific affordances of the mobile phone. The phone enables the participants to share access to video as a document of the prior interaction and establish watching of the video as a focal point in the discussion. We examine how the use of the phone in the group discussions is occasioned and made relevant in talk, how it is handled and used to share the video and search for specific moments to scrutinize. Occasioned watching of the video creates affordances for joint analysis of the moments of trouble and generates learning activity, in other words moments where the participants jointly create an interactional space for learning and orient to some aspect of L2 use as an object of learning (Kasper & Burch 2016). The analysis details the methods that participants employ in seeking and establishing new understandings of troubles in their prior interactions. Thus, it sheds light on the reflection phase of the pedagogic task as a site for instruction and learning.

2 Understanding and learning in action

Conversation analytic research has powerfully demonstrated that understanding is not a private, but interactive phenomenon: each utterance in interaction “displays a hearing or analysis of a preceding one and, thus, the very organization of talk provides a means by which intersubjective understanding can not only be continually demonstrated, but also checked, and where found wanting, repaired” (Sidnell 2010: 12; see also Heritage 1984; Schegloff 1992, Koschman 2011). Thus, the sequential organization of interaction itself is the context where intersubjective understanding is negotiated and continuously updated. Understanding is a collective achievement and it is oriented to “in the production and monitoring of action” (Mondada 2011: 542); it involves the use of multiple semiotic resources and embodied displays through which participants exhibit how they perceive and orient to prior actions. Participants in interaction can claim or demonstrate understanding (Sacks 1992: 141–142, Koole 2010) by providing the relevant next action – or indicate a problem of understanding by initiating repair.

Problems of understanding and different forms of repair through which these are resolved have been widely studied also in L2 interaction. Studies of word searches (Brouwer 2003, Hosoda 2006, Koshik and Seo 2012, Greer 2013) and other forms of repair (Kurhila 2006, Lilja 2010, 2014, Eskildsen & Theodórsdóttir 2017) have also shown how repair activities
create occasions for learning as local, socially displayed activity. Instances of trouble and epistemic discrepancies occasion sequences where the participants attend to features of the L2 as objects of learning or orient to something as newly understood or recently learnt (e.g. Markee and Kasper 2004, Markee 2008, Pekarek Doehler 2010, Majlesi and Broth 2012). Such sequences are typically initiated by noticing some feature of language use (e.g. a lexical item, grammatical feature or interactional practice) in preceding interaction or in the environment and paying attention to it for instance by repeating or voicing it (see e.g. Greer 2013, 2018). The phenomenon targeted in talk can then become the focus of (sometimes extended) learning activity, where the participants analyse, reuse, and develop new understandings of it (see also Eskildsen & Theodorsdottir 2017). Participants draw on a wide range of resources in initiating and sustaining orientation to learning: recent studies show how features of prosody, gaze, gesture, material objects and other features of the environment are used in a coordinated and layered manner to accomplish noticings and maintain focus on the objects under scrutiny (see e.g. Kasper & Burch 2016, Greer 2018, Lilja & Piirainen-Marsh 2018, Piirainen-Marsh & Lilja 2018). Building on earlier work on learning as a locally occasioned, social and interactively organised phenomenon, this study analyses how the participants create spaces for learning locally through their verbal and embodied actions. More specifically, it investigates how a mobile device is used as a resource in learning activity: the analysis focuses on the ways in which troubles experienced in prior interactions are analysed and understood retrospectively through locally-constructed mobile-supported sharing activities. The analysis thus looks beyond the local by exploring the interconnectedness of L2 speakers’ prior interactions in out-of-classroom settings and the local interactional procedures through which these are re-contextualised and changed into occasions for learning.

While problems of understanding are sometimes made explicit in interaction, they may also be oriented to implicitly or treated as “non-fatal” and allowed to pass, as shown by Firth (1996) in his study of lingua franca interaction. In this regard, analysis of the de-briefing sessions in which the participants report on their prior L2 interactions is particularly valuable. Our data show that in these de-briefing sessions in the classroom the participants sometimes address a problem that was not made explicit in their interactions in the service settings. Detailed analysis of the debriefing discussions thus sheds new light on ways in which interactional trouble may be ‘noticed’ and analysed retrospectively, and on the affordances
this creates for noticing objects of learning, discovering new practices and developing new understandings to be carried over to future interactions. The analysis thus elucidates how the combination of interactional data both from ‘primary interactions’ and from participants’ retrospective discussions about these interactions opens up possibilities to notice and analyse phenomena that would otherwise be difficult to observe. In what follows, we show how the situated use of the phone and collective watching of the video affords additional resources for noticing and making sense of interactional trouble, and sustaining focus on learning.

3 The mobile phone as a situated resource

A growing body of research describes how the mobile phone as a complex, yet commonplace technological and cultural artefact, creates new kinds of communicative spaces and affordances for social action. The technological affordances (Gibson 1977, Hutchby 2001) of mobile phones structure social interaction: the resources that they make available (e.g. digital images or message exchange) are used in coordination with other semiotic resources in organizing participation. Licoppe (2004) and Arminen and Weilenmann (2009) have argued that the phone impacts the coordination of social action by interweaving co-present interactions and mediated distant interactions into a single web of activities. Raclaw, Robles & DiDomenico (2016) observe how mobile phones transform the participants’ ability to gain access to knowledge and experiences. They “provide a mediated form of experiential and epistemic access in contexts where this access would otherwise be lacking, thereby accommodating new forms of participation across these sequences” (Raclaw et al. 2016, 364).

In our data, the participants use the unique affordances of mobile phones in sharing the self-made video and treating it as a focal point of activity in their discussion. In peer discussions in the classroom the video is established as an object of shared attention to be scrutinized in convergent interaction (Brown et al. 2013, 2014, Hellermann, Thorne & Fodor 2017). In spite of its small size, the smart phone as a material object affords an easy reconfiguration of a limited number of participants around a screen and enables shared focus on a single course of action (Brown, McGregor & McMillan 2015). Detailed analysis of the participants’ interactional and bodily conduct reveals their alignments with regard to the phone, e.g. when and how the phone becomes an object of mutual orientation, and how its use shapes the participation framework. The analysis to follow illustrates how situated use of the mobile
4 Mark’s interaction at the University café

In the following sections, we will first focus on Mark’s interaction in a University café. The analysis illustrates that during the focal turns of the interaction Mark does not orient to trouble in understanding in any observable way. However, these focal turns will be retrospectively treated as problematic in the reflection discussion in the classroom. Section 5 will show how this is accomplished and how the videorecording of the service encounter is used to give the other participants access to the events that took place. The data has been transcribed according to the conventions of CA and the conventions for multimodal transcription developed by Mondada (2014). Still photos (frame grabs) from the videos illustrate the changes in the body postures and gestures of the participants when relevant for the analysis.

Excerpt 1 shows the focal turns of Mark’s interaction in the University café. During these turns Mark inquires whether he will get his hot chocolate for free, as his visit to the café is part of a course assignment (l. 3–4). Mark smiles broadly throughout the whole sequence (see figs 1, 2 & 3), which signals that he treats the situation as somehow humorous. His question is treated as funny also by the clerk, who displays affective alignment through her facial expressions: before reacting to Mark’s question verbally, she smiles and moves her gaze from left to right (see fig 2).

Excerpt 1. Mark in the University cafe

01 CLE: ^(noin) >ole ^*hyvä< (like this) here you are
        ^>>walks towards the tilt with hot chocolate in hands
        ^>stops and puts the hot chocolate on the counter
        mar: *reaches right hand towards the hot chocolate ->

2 Smiling and laughter have been shown to have varied functions in interaction. In addition to humor, they can also be connected e.g. to marking interactional trouble (Haakana 2001, Sert & Jacknick 2015, Petitjean & González-Martínez 2015). In excerpt 1, however, it is clearly observable that the participants treat the situation as funny and are enjoying the conversation.
02 (.)

03 MAR: *eh*: +#(.): eihän se: *maksa mitään (.)
eh: (.): it doesn't cost anything (.)
*smiles -> end of excerpt

->*retrieves hand from hot chocolate

+gaze to CLE ->
cle: ∆gaze to MAR ->
fig: ∆gaze to MAR ->
fig: #fig.1

koska: mä tule:n suomen (.): kurssiltafi?
because I come from the Finnish (.): course does it?

05 (0.6) ∆^(.)

cle: ∆gaze first to left and then to right ∆gaze to MAR ->
cle: ∆^ smiles -> 1.10
fig: ∆#
fig: #fig.2
06        (.) ^ *(3.4)           ^(0.6)                         ^
 cle:       ^steps back and walks to
 kitchen behind her ^walks back to tilt, nods twice^  
 mar:       *turns upper body towards the camera person and
 then back to tilt, smiles

07 CLE:   Δfokei (.) maksaať
 okay      it costs
 ->Δgaze down ->

08 MAR:  £jooh+ *]>joo joo<£#
 yeah      yeah yeah
 ->+gaze down ->
 *starts to handle purse
 fig:       #fig.3

09 JOH:   en(-)

10 CLE:   opiskelijaΔ^+?
 student
After having reacted to Mark’s question with a wide smile and by rolling her eyes noticeably from right to left (l. 5, fig 2), the clerk walks to a kitchen behind her to consult her colleagues. When she comes back, she produces an answer that will be later treated as a source of trouble in the classroom discussion (l. 7).

In order to understand the interactional implications of the clerk’s response, it is necessary to analyse Mark’s question in more detail. In the overall structure of the service encounter, Mark’s question takes place towards the end of the encounter. The clerk has just prepared the hot chocolate and handed it to Mark (l. 1). The next relevant activity in the encounter is the payment sequence. Mark’s question is produced at this juncture, before the clerk has announced the price of the hot chocolate. Thus, it initiates an insert sequence which puts the progressivity of the business ‘on hold’. The question turn (l. 3–4) is grammatically designed as an interrogative: it begins with the negation verb ei, to which the clitic particle -hän is added (eihän). The clitic -hän in Finnish bears many connotations, but one of its central functions is to mark the information presented in the utterance as shared and known by all the participants. In some cases interrogatives including the clitic can be interpreted as confirmation checks. (See VISK § 830, Lehtinen 2012). Here the interrogative suggests a shared assumption that the hot chocolate is free of charge and seeks confirmation for it. The closest translation of the question in English would be a declarative sentence with a tag question (the hot chocolate does not cost anything, does it). Already the linguistic form of the question shows that the question is designed to invite a response showing agreement (see
Mark's embodied conduct also works towards getting the clerk to confirm that the hot chocolate does not cost anything: he invites the clerk to respond by gazing directly at her while uttering his question. At the same time his broad smile and slight chuckle display a playful orientation towards the situation. All in all, his conduct indicates that the inquiry could be interpreted as a playful attempt at negotiating or doing bargaining.

A preferred answer to a question designed in this way could be accomplished by repeating the negation verb *ei* or by producing a combination of the negation verb and the stem of the main verb cost: *ei maksa* (see also Laury 2017). However, after her short visit to the kitchen, the clerk answers Mark's question by smiling and saying *okei (.) maksaa* (okay (.) it does cost). While this answer is phonetically quite close to the preferred answer *ei maksa*, its meaning is the opposite: it clearly disagrees with the question's presupposition of the hot chocolate being free of charge. The clerk begins her turn with the particle *okay*, which in this case cannot be heard as a direct reaction to Mark's question. Instead, the particle marks a change in the activity context: it serves to signal that the just preceding conversation in the kitchen has finished, the confusion caused by Mark's question is resolved and the clerk is now ready to move towards the next activity, which in this case is paying. (See also Beach 1993.) The turn-initial *okay* is followed by a short gap after which the clerk repeats the main verb in Mark's question in third person singular (*maksaa, it costs*). This repetition itself is a sufficient disagreeing answer to Marks' question³.

In the next turn, Mark reacts to the clerk's response by repeating the affirmative particle *joo* three times, by turning his gaze down and starting to handle his wallet (l. 8, fig 3). The physical activity indicates that Mark is orienting to paying as the next relevant activity. He thus demonstrates understanding the practical implications of the clerk's response. The multiple use of the affirmative particle (*joo joo joo*) also suggests that the turn displays understanding of the sequential implications of the clerk's response in relation to the whole activity, even if Mark had not understood the specific meaning of the turn (see also Stivers 2004). Next, the participants move on to the payment sequence after which the service encounter is closed.

³ A dispreferred answer can thus be produced by a sole repetition of the main verb (*maksa, it does cost*). Another way to produce it would be a combination of a dialogue particle *kylä*, that would oppose the implication of the previous turn (see also Keevallik & Hakulinen 2017), and a repetition of the main verb (*kylä maksaa / Yes, it does cost*).
5 Revisiting Marks' encounter in the de-briefing activity

5.1 Co-constructing the problem and establishing the relevance of the mobile phone

Mark went to the University café together with his fellow student, John, who videorecorded the interaction. In the classroom, the students worked in small groups of 4–5 and were instructed to watch the videos and share their experiences of the interactions they had participated in in the wild. Their discussions were guided by a list of questions (see appendix 2). One of the questions invited the students to discuss whether anything surprising happened during the encounter. The discussions were typically organised as a series of tellings that occasioned mobile-supported sharing activities, which enabled the students to give others access to the videos as records of their interactions in the service encounters. At the same time, the videorecordings were also used as evidence on which the reflective discussion can be based on (see Raclaw, Robles & DiDmenico 2016). This section focuses on the sharing activity that is occasioned by Mark's telling about his experiences during the service interaction.

Prior to excerpt 2, Mark has explained that he found it surprising that the clerk (whom he refers to as 'one girl') did not know how to answer his inquiry about whether the hot chocolate was free. This topic was evoked by one of the questions guiding the group discussion (see Appendix 2). In lines 1–4, John elaborates on the topic. His turn is the first one in the discussion that focuses on what the clerk actually said in the situation and establishes a puzzle to be solved: according to John, the clerk said that the hot chocolate was free, and yet Mark paid for it. John's turn is followed by interpretations presented by the other participants. By formulating their versions of the events, the participants co-construct a story. During the telling the participants, Mark, John and the teacher, establish joint orientation to a problem of understanding by focusing on the meaning of the clerk's answer and considering what kind of reactions would have been warranted in the situation.

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4 John refers to the clerk as 'the other girl'. We take this to refer to Mark's earlier turn in which he refers to the clerk as 'one girl' in Finnish. The use of the word 'other' in this context is puzzling since they seem to be speaking of the same person all the time. This is evident in the content of John's turn, which makes it clear that he is talking about the clerk who was present when Mark paid for the hot chocolate.
Excerpt 2: Co-constructing a puzzle to be solved

01 JOH: ajattelen ∆^ (.)+ umm: aa, (0.6) ^ (0.6) ∆I think the other girl
      I think             umm: aa, (0.6) (0.6)
      ^touches the recorder ^points backwards over the shoulder->
      ∆gaze towards recorder       ∆gaze toward MAR-> 1.15
      +gaze down towards John’s hand on table->

02 mar: said it was free

03 (0.2) ^ (0.2)+
      joh: -> ^moves hand from shoulder and points forwards->
      mar: ->+gaze follows JOH’S pointing gesture and
            then turns towards JOH->

04 JOH: but then you pay

05 (.)

06 MAR: maybe

07 (0.4)

08 TEA: ^ai ↑jaa
      oh
      joh: ->^moves hand to chin-> until end of excerpt

09 MAR: mutta +mutta   hän (0.4) hän sanoi ++hän (.)
      but   but    she    she    said    she
      ->+turns gaze towards phone    +gazes towards JOH->

10 +*this girl, like the first one, +*(.)
    ->*points to the phone on the table    *puts hand on phone->
    ->+gaze back towards phone    +gaze towards JOH->

11 han sanoi, (0.8) ma ei maksa: +(.)
    I NEG pay-STEM / cost-STEM
    she said    (0.8) I don’t pay
    ->+gaze back to phone->

12 JOH   hm=

13 MAR: *=I think< like she said ei
      NEG (negation word)
      -*starts swiping the phone with RH index->

14 and then she say maksa (. ) like pay++
      pay/cost
      -*points towards the TEA->
      -*+gazes toward tea, gaze then
      back to phone->

5The participants focus on the verb maksaa in their discussion. In Finnish, this verb means both 'cost' and 'pay'. Since it is not always possible to interpret which one of these meanings the participants are referring to, we have decided not to translate the verb in the transcript. Instead, the transcript includes a gloss that indicates whether the verb has been used in infinitive (INF) or in some other form (the gloss STEM refers to the stem of the word which is also used as the imperative form). The reader is advised to pay attention to the original line because the participants use both English and Finnish in their discussion and also details of embodied conduct are important in constructing meaning.
Excerpt 2 shows that while the participants try to figure out how the clerk responded in the situation they at the same time seek to resolve a larger problem of understanding: whether the act of paying was necessary. Their focus is thus not only on the language used by the clerk, but also on whether Marks’ actions in the situation were appropriate or not. John’s turn builds a contrast between his interpretation and Mark’s actions in the situation: John had understood that the hot chocolate was free (l. 1–3), but Mark had paid for it nevertheless (l. 4). This puzzle establishes the clerk’s answer as the focus of talk.

Mark reacts by first giving a partly aligning answer “maybe” (l. 6); he thus treats John’s interpretation as possibly right. The teacher, on the other hand, treats John’s description of the situation as newsworthy and receives it with a change-of-state token *ajaa* (see Koivisto 2016). In the next turn, Mark continues to explicate his understanding of the situation. The turn-initial particle *but* (mutta, l. 9) projects that he is about to add something that contrasts with the interpretation presented by John. He produces the reporting clause *hän sanoi* twice and then reports that the clerk said “*ma ei maksa*”, which can be heard as meaning ‘I don’t pay’ (l. 9–11). In his pronunciation, Marks does not make a clear difference between the sounds *a* and *ä*, and therefore, in his turn, the first-person pronoun *mä* (I) is not standard-like but sounds like *ma* and could also be interpreted as being the beginning of the verb *maksaa*. 
However, the word is not cut off, nor is it followed by a pause which might indicate need for self-repair. Instead, Mark immediately continues the turn with the negation verb *ei* and the main verb *maksa* (cost/pay). Thus, his turn in this context is hearable as indirect reported speech communicating that the clerk had said that he does not have to pay for the hot chocolate. After this Mark, however, continues in English with the hedge *I think* (see Kärkkäinen 2003) and begins to unpack the clerk’s turn he is reporting about. He details that in his hearing the clerk uttered the negation verb *ei* (no, l. 13) and then repeated the stem of main verb *maksa*, which he also translates into English as *pay* (l. 14). The stem *maksa* is also the imperative form of the verb. Segmented this way into two separate intonation units, the clerk’s answer could also be understood as negating Mark’s assumption about the hot chocolate being free and performing a request to pay for it. By hedging and segmenting the response (as he heard it) into two lexico-grammatical units, Mark thus orients to the possibility that he had not heard or understood the clerk correctly.

While producing his turn, Mark shifts his orientation to his phone both by gazing and pointing towards it (l. 9–10). As he starts to detail what he thinks the clerk answered (l. 13–14) he touches the phone and starts swiping the display with his right-hand index finger. This orientation to the phone establishes its relevance to the telling in progress. The pointing gestures coordinated with verbal references to the actors in the reported events also invoke the relevance of the video as a record of the past interaction. All in all, Mark’s embodied behaviour establishes the recording as an important resource for the activity of making sense of the clerks’ answer and its implications.

John continues the problem-solving sequence by constructing a turn that seems to present an alternative to Mark’s hearing (l. 15). The turn-initial particle chain *yeah but* projects disagreement. The hearing offered by John is “*ei maksa*” with an emphasis on the negation (*ei*). This hearing is different from the previously presented one in that both elements of the verb construction are presented in the same intonation unit. This kind of an answer would have been heard as confirming the presuppositions of Mark’s question in the situation and thus saying that the hot chocolate is indeed free of charge.

John’s turn gets an affirmative response from Mark (l. 17), after which also the teacher joins the conversation and presents her hearing. Also she constructs her turn as an alternative to
the previously presented hearings by signaling contrast (yeah but). While reproducing the same verbal construction as John in his previous turn (ei maksa), she highlights the ambiguity of the verb by translating it into English as 'doesn’t cost’ (l. 18). Thus, her interpretation of the meaning of the utterance is also that the hot chocolate does not cost anything.

At this point all three participants have provided their interpretations of the clerk’s answer. In light of the data from the actual service encounter (Ex. 1) it is, however, possible to observe that none of the interpretations presented so far capture what was actually said by the clerk. By framing the turns as alternatives to each other, the participants show that they orient to the discussion as a problem-solving activity. They set out to find a solution to a situation that puzzles them all and work to co-construct an understanding of the clerks’ answer that could be shared by all the participants. In the end of excerpt 2, John sustains orientation to solving the problem with his remark on punctuation (l. 21). With this he calls attention to prosodic features of the clerk’s turn and invokes the need to analyse what the answer sounded like in order to figure out its meaning. At the same time he turns his gaze towards the phone, projecting use of the phone as a resource for further analysis of the focal turn. Also Mark turns his gaze towards the phone and starts handling it (l. 20).

The incongruity between the participants’ understanding of the clerk’s answer and Mark’s actions in the situation calls for clarification and opens up a space for the subsequent sharing activity. Next the participants inspect the self-made videorecording of Marks’ interaction to find a solution to this puzzle.

5.2 The sharing activity

As the previous example has shown, Mark and also John orient towards Mark’s phone as an object relevant to resolving the puzzle through embodied activity. Excerpt 3 demonstrates how Mark disengages from talk with the other participants and starts to hum (l. 25) while concentrating on handling of the phone. Together, these activities indicate Mark’s unavailability for talk at this point (see also Stevanovic 2013). After handling the phone for a while, Mark takes it in his hands (l. 27), starts the video (l. 29) and puts the phone back on the table so that the screen is visible to all the participants (l. 34). This positioning of the phone is crucial for the ongoing activity; placing it at the centre of the table allows the other
participants direct access to the talked-about-events by enabling them to both see and hear the video. This also marks the first move in the co-constructed sharing activity.

Excerpt 3: Sharing the video and giving access to the clerks’ answer

21 JOH:  

22 (0.4)  

23 TEA:  
nii  
yeah  
24 (0.8)  

25 MAR:  

26 JOH:  

27 Δdid you make any agreement (. ) with this (. )  
Δgaze towards the teacher–>  

27 Δor ^did they Δmake any *agreement^  
-> ^points towards the researchers ^  
->Δgazes towards  
the researchersΔgaze back to teacher–> 1.34  
mar:  

28 (1.2)  

29 TEA:  

30 (.)  

31 TEA:  

32 ^(. ) ^  

joh:  ^nods^  

33 TEA:  

34 *Δ #(0.4) (0.6) #  
mar:  

joh:  ->Δgaze towards phone–>
35 VID:  *(ok)*ei maksaa?  
*Okey it costs*

36 JOH:  Δ^ei [maksanot cost  
^points towards the teacher^  
-> Δgaze towards the teacher->

37 MAR:  [*+ei maksanot cost  
->*raises position->  
->+gaze towards teacher->

While Mark handles the phone, John engages in a short side sequence with the teacher about a possible agreement between the researchers (who are referred to as “they” in John’s turn in
line 27) and the café concerning payment. With his inquiry (l. 26–27) John entertains the possibility that the researchers had made an agreement with the café about the products being free of charge for the students video-recording their interactions. This inquiry by John shows that the problem-solving activity is not only focused on what the clerk said, but also on whether Mark should have paid or not. After checking whether John’s question was meant to refer to the issue of payment (l. 29, 31), the teacher answers indicating there was no agreement (l. 33).

After the teacher’s answer, the video starts running and all the participants lean towards the phone and start watching it attentively (see fig 4). Through their bodily actions the participants thus establish the video as a focal object in the joint problem-solving activity. As soon as the clerk’s answer is hearable on the video, both John and Mark articulate their hearings of it (l. 36, 37). At the same time both raise their gaze towards the teacher as if seeking her confirmation. In this way, they construct their turns as candidate hearings (see Schegloff 1997: 527, Koshik 2005) of the target utterance and treat the teacher as an expert who is able to assess whether their hearings were correct or not. The teacher, however, does not raise her gaze from the video, and both Mark and John also immediately re-engage with watching the video (l. 40, 41).

Excerpt 4: watching the video

36 JOH: \( \Delta^\text{ei maksa} \)
\( ^\text{NEG cost-STEM/pay-STEM} \)
\( ^\text{points towards the teacher}^\Delta \)
\( ^\text{gaze towards the teacher}^\rightarrow \)

37 MAR: \( ^\ast^\text{ei maksa}^\ast \)
\( ^\text{NEG cost-STEM/pay-STEM} \)
\( ^\rightarrow^\text{raises position}^\rightarrow \)
\( ^\rightarrow^\text{gaze towards teacher}^\rightarrow \)

38 VID: opiskelija?
student?

39 JOH: see?

40 +(.)
\( ^\text{mar:}^\rightarrow^\text{gaze towards phone}^\rightarrow \)

41 JOH: \( ^\Delta^\text{put it a little bit back} \)
\( ^\rightarrow^\text{gaze towards the phone}^\rightarrow \)
\( ^\text{points towards the phone}^\rightarrow \)
John asks Mark to put the video a “little bit back”, i.e. to show the clerk’s answer again (l. 41). As Mark handles the phone, Claire provides another alternative hearing (l. 43). In her hearing, the clerk answered “ei maksaa”. Although ambiguous, this version addresses the possibility that the hot chocolate had to be paid for. This meaning is conveyed by the repetition of the main verb (see footnote 1). At this point Mark has identified the relevant part of the video and now guides the collective watching by verbalizing what is about to be seen on the video: the clerk goes back to the kitchen to consult her colleagues (l. 44, 49). The teacher, on the other hand, orients to Claire’s turn by producing a change-of-state token (Heritage 1984) (l. 45) and by producing a hearing of the clerk’s turn that aligns with Claire’s turn and differs from the ones presented previously. She highlights the stress on the negation verb and the pause between the negation verb and the third person singular of the main verb. Produced in this way the answer would have first negated the presupposition of Mark’s question and then communicated that the hot chocolate indeed costs and is not free.

After the teacher’s interpretation, the watching of the video continues. Excerpt 5 shows how Mark points to the phone and draws everyone’s attention to the clerk’s reaction to his question (l. 62).

Excerpt 5: Observing the reaction by the clerk and making sense of the answer
(7 lines omitted, participants watch video, Mark comments)

57 MAR:  *yea yeah< this now* [(I) go and ask]  
->*points towards phone*

58 TEA:  [ >no niin joo<

59  

60 VID:  Mark: Eihän se maksa mitää koska mä tule: suomen (kurssilta)  
It does not cost anything because I come from the Finnish course, does it?

61  

62 MAR:  eh hah* [hah he heh *heh  
*points towards the phone* hand back to chin->

63 TEA:  [hh hehh hehh

64 JOH:  [HEH ha ha ha

65 JOH:  |I go and ask| hh hh hh

66  

67 VID:  Clerk:  okei maksaa?

68 VID:  Mark:  joo, (.) joo joo

69 TEA:  α Δ#okei (.) maksaa  
okey (.) it costs  
α raises gaze towards John and Mark ->

joh: ->Δgaze towards teacher->
mar ->+gaze toward teacher->
fig:  #Fig 6

70 MAR:  yea (.) >okei?<

71 TEA:  joo [okei maksaa ni,  
yeah okay it costs
Mark's question on the video is followed by a pause which is also oriented to during this group discussion (l. 61). Mark starts to laugh after the pause and points towards the phone (l. 62). In the service encounter, Mark's question was followed by the clerk's embodied display of affect: she smiled and moved her gaze from left to right before taking steps back and walking to the kitchen behind her. Here, Mark's pointing gesture thus draws everyone's attention to the clerk's reaction that is now observable on the video. Subsequently both the teacher and John start to laugh (l. 63, 64). The other participants also smile but do not laugh aloud. As the participants continue watching, Mark again verbalizes what is going on with a comment that reenacts what the clerk might have said to account for her visit to the kitchen but did not (“I go and ask”, l. 65). As soon as the clerk's response and Mark's reaction to it is heard again (l. 67–68), the teacher repeats it (l. 69). She articulates her repetition quite slowly and clearly which indicates that she is certain about her hearing this time. She also simultaneously raises her gaze from the phone towards John and Mark. By the repetition the teacher thus confirms the correct hearing of the clerk's answer. Also Mark then repeats the particle *okei* (l. 70), which was the part of the clerk's turn that he previously did not hear correctly. This repetition which is preceded by the affirmative particle “yea” thus shows that also he has gained some new understanding of the clerk's answer. Next, Claire seeks confirmation for her understanding that *maksaa* means pay (l. 73), which the teacher confirms (l. 75). John then also shows understanding by giving a rough translation of the clerk's answer (l. 76).
In sum, during the sharing activity the participants put a lot of effort into hearing what the clerk actually said and finding out what her answer meant in the situation. The affordances of the mobile phone provide crucial resources for resolving the trouble. At the start of the problem-solving activity, the participants identify the trouble by providing their individual interpretations of the situation, framing them as alternatives to each other (excerpt 2). This opens up a space for resolving the trouble by sharing the video. The sharing activity allows all participants epistemic access to the video as a record of the interaction experienced by Mark and witnessed by John, and enables them to check their hearings and reinterpret them. The teacher is oriented to as the party with epistemic authority: the participant who has the expertise to assess which one of the proposed hearings is the correct one.

5.3 Evaluation and closing

At this point in the discussion, the co-constructed puzzle is solved and the mobile-supported sharing activity is finished. However, the participants continue to comment on their interpretations and on the whole episode.

Excerpt 6: Commenting on the episode

78 MAR: yeah:^
   joh: ^turns towards a bottle on left and starts handling it->
79 (.)
80 JOH: oh: I thought it was Δei maksə+  
    NEG cost-STEM / pay-STEM ->gaze toward MAR->
    mar: ->+gaze to JOH
81 TEA: tai sit Δor [+or then it was ei maksaa or then]  
    NEG cost-INF / pay-INF
    joh: ->gaze toward teacher->
    mar: ->+gaze towards teacher
82 MAR: [or *ei (.) *maksaa+  
    NEG cost-INF / pay-INF -> *point to left*point to right ->+gaze towards JOH->
83 CLA: [( - - )
84 TEA: [so no (.) it does cost
85 JOH: Δ+*°okəy° hm: ->gaze down->
The participants work towards closing the sequence focusing on Mark’s interaction by showing how their understanding has changed. John orients to a new understanding with his turn that begins with a change of state token and continues with the framing ‘I thought’, followed by his earlier hearing of the clerk’s answer (l. 80). The teacher then presents her new interpretation by explaining that the answer could also have been *ei maksaa* (no it does cost) produced as two intonation units (l. 81, 84). Mark presents a similar interpretation in overlap (l. 82). After this, the participants evaluate Mark’s actions in the café as a “nice try”. With this they playfully reframe his actions as an intentional attempt to get the hot chocolate for free. This evaluation also frames the whole discussed episode as humorous and shows that even if the participants have put a lot of effort in trying to understand what happened in the situation and what the clerk actually answered, their overall orientation to the situation is also playful (see also Lilja & Piirainen-Marsh 2018).

6 Discussion

This paper has analysed how the situated use of a video recorded on the mobile phone creates affordances for joint problem-solving activity through which second language learners share access to details of their prior interactions and establish these as the focus of joint learning.
activity. The analysis demonstrated that while the focal participant, Mark, did not observably orient to problems of understanding during his service encounter outside classroom, in the retrospective discussion all the participants – including Mark – had trouble in understanding what the clerk’s response to his inquiry was, how it could be interpreted and what kind of actions by Mark would have been appropriate in the situation. The retrospective discussion was made relevant by the pedagogical context: the students’ task was to videorecord their service interactions outside the class and to talk about these interactions and the language use experiences gained in them back in the classroom. The analysis showed how the focal participants’ tellings of their experiences created a space for a problem-solving activity and how they used the unique affordances of the mobile phone to give others access to the video as a record of the previously experienced interaction. This allowed also those participants who had not witnessed the talked-about interactions to see, hear and analyse key moments in the interactions in order to solve the problem.

The analysis illustrated how Mark orients towards his phone as a relevant object throughout the whole activity. Three (distinct) phases can be identified in the problem-solving activity. In the first phase, Mark’s telling occasions alternative interpretations of the prior interaction, through which the participants orient to the clerk’s response as a problem. Mark and John’s embodied alignments towards the phone as a material object indicate that they treat the video as a crucial resource for resolving the problem. In the next phase, Mark disengages from talk and initiates a sharing activity by placing the phone on the table so that the screen is visible to all participants in the group. This allows the participants to engage in collective watching of the video. The video-recording on the phone thus serves a means to provide a “mediated form of experiential and epistemic access” (Raclaw et al. 2016, 364) to the discussed events to those participants who did not witness or participate in the interaction in the café. As the video-recording provides access to the details of the interaction, it can be used as the basis for finding a solution to the co-constructed puzzle. The participants closely attend to details of talk on the video and engage in joint action as they search for evidence of different hearings of the clerk’s response and for the correct interpretation of the situation. The third phase takes place after the problem has been resolved: the participants disengage from the sharing activity, comment on the newly established understanding and co-construct a playful and humorous stance on the actions that were initially treated as problematic.
The data for the paper come from experiential learning activities that aimed to connect the language use environments inside and outside the classroom. The learning activities were assigned by the teachers, who gave instructions for planning the out-of-classroom task and provided the students with questions guiding the debriefing discussion. However, the teachers did not participate in the interactions in the wild and, apart from designing the general questions guiding the classroom discussion, they had no influence on what the students paid attention to in their retrospective discussions. The students’ discussions were centred around linguistic and interactional phenomena that had caught their attention in the encounters. In this sense, the discussions were built on learners’ own experiences and interests. Our analysis demonstrates how the students paid attention to details of interaction and performed quite sophisticated analysis of prosodic and lexico-semantic features of the focal turn while collectively searching for a shared understanding of its meaning. This level of detail in their analysis of the interaction could not have been achieved without the videorecording and repeated listening. The videorecording was a crucial resource for the students first to remember exactly how the interaction unfolded and then provide others access to it and enable all participants to view and to listen to the focal turns repeatedly. This made it possible to first identify the focal turn which was treated as the source of trouble and then to understand what it meant in the context in which it was used. The ability to analyse how utterances can be heard and understood in their interactional context is a crucial part of interactional competence. The analysis showed that the mobile phone augments the students’ resources for resolving interactional troubles and engaging in joint analysis of previously experienced interaction. In addition, the students were enthusiastic and attentive throughout the discussion. We believe that this is because the task is related to their own real-life experiences that are meaningful, relevant and also consequential for them (see also Piirainen-Marsh & Lilja, 2018).

One of the corner-stones of experiential pedagogy is reflection (see Knutson 2003, Kohonen, Jaatinen, Kaikkonen & Lehtovaara 2011). Reflection can be defined as an activity “in which individuals engage to explore their experiences in order to lead to new understandings and appreciation” (Boud, Keogh, and Walker 1985: 3). In this sense, the problem-solving activity analysed in this paper could also be referred to as reflection. However, as Walsh and Mann (2015) point out, our understanding of what reflection in interactional terms looks like, is still limited. Walsh and Mann (2015) also make a case for more data and evidence-based reflection
in teacher training. Our analysis shows that data-driven exploration of one’s own language use practices is also useful for L2 learners; it can generate noticing interactional practices and provide opportunities for gaining a deeper understanding of language use in situated interaction.

We hope to have shown that for the study of second language learning in interaction, the combination of data from the same participants interacting inside and outside the classroom is valuable. As language users, we often think back on our previous interactions and try to understand why the interactions unfolded as they did or why the co-participants acted in some specific ways. For language learning, sharing these thoughts can be valuable, as the analysis presented here illustrates. For researchers of language learning in interaction, videorecordings of such retrospective discussions provide fruitful data because they open up possibilities for observing what language learners notice and treat as worthy of attention. They also make it possible to trace how the participants analyse their own prior interactions in their own terms. For unraveling the mysteries of language learning, it is useful to have data from the same participants’ interactions in situations characterized by different material ecologies and to be able to understand what meaning the participants themselves attribute to their own past interactions.

References


Mondada, Lorenza. 2014. Conventions for multimodal transcription. Available at: https://franz.unibas.ch/fileadmin/franz/user_upload/redaktion/Mondada_conv_multimodality.pdf


**Appendix 1**
Transcription symbols

- falling intonation
- level intonation
? rising intonation
↑ rise in pitch
↓ fall in pitch
dog emphasis is indicated by underlining
: lengthening of a sound
so- a dash indicates a cut-off of a word
° talk inside degree sings is quieter than the surrounding talk
£ smile voice
> < talk inside is done with faster pace than the surrounding talk
< > talk inside is done with lower pace than the surrounding talk
[ utterances starting simultaneously
( ) micropause, less than 0.2s
(0.5) silences timed in tenths of a second
= "latching", i.e. no silence between two adjacent utterances
( - ) item in doubt

Multimodal transcription follows the conventions developed by Mondada that are available at:
https://mainly.sciencesconf.org/conference/mainly/pages/Mondada2013_conv_multimodality_copie.pdf
The following symbols are used to indicate the multimodal conduct by the participants:

In excerpt 1:
** Marks's embodied actions
+ + Mark's gaze
^ ^ Clerk's embodied actions
Δ Δ Clerk's gaze

In other excerpts:
** Marks's embodied actions
+ + Mark's gaze
^ ^ John's embodied actions
Δ Δ John's gaze
◊ ◊ Teacher's embodied actions
α α teacher's gaze
□ □ Embodied actions by other students
ƒ Phone making noise

Appendix 2

Questions guiding the de-briefing discussion

- What did you order / ask?
- How did the situation go? You can watch the video while talking.
  - What went well? Why?
  - Did anything surprising happen?
  - Did you experience any trouble (e.g. in understanding, or with the vocabulary)? How did you solve these problems?
  - How did it feel?
- What do you want to share with other students?
  - Think about three things that you learned from this and want to share with other learners of Finnish.