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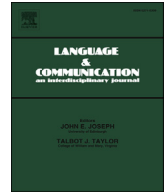
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Changing the ownership of ideas: Multimedial accomplishment of collaborative reflection in an organizational workshop

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ABSTRACT

Reflecting on work processes together with one's co-workers is becoming increasingly important in workplaces. This study examined collaborative reflection in the organizational context through analyzing a case of a complex workplace setting where an enterprise social media platform, talk-in-interaction, and handwriting were used to engage participants in the process of reflection. Drawing on the concept of remediation, the results show that collaborative reflection is interactionally accomplished through a multimedial activity chain, in which the ownership of presented ideas is transformed from individual ideas into shared views of the team. The study shows in detail how the process of collaborative reflection evolves in workshop activities and how both traditional and digital media are used to support the process.

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1. Introduction

Collaboration and collective knowledge production, through which employees collectively make sense of organizational issues, are characteristics of modern workplaces (Maitlis and Christianson, 2014). As Iedema and Scheeres (2003) note, work today increasingly involves talking about and reflecting on work processes together with one's co-workers. In addition, people are often expected to do such reflection work in separate but somehow connected organizational units, which means that teams not only work internally but also need to establish and manage interactions with other teams in their company (van Osch and Steinfield 2016). In recent decades, organizations have started to invest in technologies and platforms that enable effective online collaboration of this kind within and across teams (Darics and Gatti, 2019: 238). A current trend in workplaces is the use of social media tools designed specifically for the purpose of working collaboratively. These platforms facilitate sharing, editing, and documenting work-related information and thus enable members both to collectively reflect on the processes they are involved in and to track these processes (Song et al., 2019.)

Although digital devices have become a crucial part of our everyday lives partly changing the ways we interact with each other and do our jobs, the “new” media forms have not completely replaced the traditional ones: individuals in organizations continue to rely for example on paper in their collaborative sensemaking processes (see Nielsen, 2012; Jensen et al., 2018; Nissi and Pälli, 2020). Thus, rather than examining a single digital medium in isolation, it is important to study the ways

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people engage with a range of media to accomplish communicative and collaborative work (Boczkowski and Orlikowski, 2004).

In this article, we investigate multimodal and multimedial collaborative reflection in the organizational context. We approach this issue through an illustrative case study where enterprise social media, post-it notes, and the human body are used during a face-to-face workshop to carry out a particular organizational task that has to do with reflecting on a major project that the participants are involved in. The focus of the study is on the reflection process undertaken within one team before its outcomes are presented and further elaborated with the upper management and other teams involved in the project. Although the focus is on the interactive work of one team, we examine this in relation to what happens later to the outcomes of the reflection process at a broader organizational level. We approach the case through the following research questions:

- 1) How are different modes and media used in collaborative reflection?
- 2) How is joint understanding achieved through a chain of multimedial actions?

The aim of our case analysis is to gain a better understanding of how different media converge in everyday activities in organizations and what kinds of roles they may have in supporting collaborative reflection. In addition, we aim at discussing the role of digital technology in workplaces through the lens of multimodality. While researchers have often used the terms *intermediality* and *transmediality* to refer to interrelations between media (see, e.g., Elleström, 2014), we prefer to use the concept of *multimediality*. We see it as a broader concept that better describes the use of multiple media and their interrelations and transformations. In talking about multimodality, we want not only to distinguish between media and modes but also emphasize the integral relationship between them (see Kress and van Leeuwen, 2001; Bateman, 2017). While modes can be seen as ways of conveying meanings, such as talk, handwriting, or gestures, the concept of medium refers to the material resources used in meaning-making, such as paper or digital platforms, through which modes come into being (Kress and van Leeuwen, 2001). Thus, in this study we see multimodality as a necessary counterpart of multimodality.

Below, we first introduce the background to the study, with reference to studies in the fields of Computer Supported Cooperative Work (CSCW), conversation analysis and workplace studies that have focused on collaborative work and the ways in which different kinds of materialities, such as technologies and artefacts, can be used to facilitate these activities (Heath et al., 2000). We then present our data, which were gathered in the context of a development project in a business organization. In the same section, we introduce the methodological tools and concepts that enabled us to examine the stage-by-stage process of constructing reflection and the relations between the multiple media used.

In our analysis, we show that the reflective task in question is accomplished through distinct stages that form a multi-medial chain through which the group's members collectively make sense about the problems they consider the organization to be facing. We show how, throughout the reflective process, ownership of the participants' ideas is changed in order to construct a joint understanding of the organization's problems and of the team as an entity. We also show that while the participants accomplish the task in a face-to-face meeting, the digital platform used in the process has a major role in turning individual ideas into shared views. The concluding section discusses the results and their implications for organizational work and outlines potential future directions for multimedia research, especially in workplace contexts.

2. Collaborative reflection in workplaces

Reflection is a fundamental element of modern organizations that can be seen as offering a valuable perspective on organizational change and development as well as many other organizational concerns. Many work-related processes, such as sensemaking, learning, and decision-making require reflection at some level. (Boud et al., 2006; Reynolds and Vince, 2004). In these contexts, people engage in making sense of the work they do, thereby actively contributing to metadiscursive communication in order to find better working practices (see Iedema and Scheeres, 2003; Prilla et al., 2012). In addition, such work activities are increasingly being accomplished together with co-workers in a collaborative manner (Iedema and Scheeres, 2003). Thus, whereas reflection was earlier seen primarily as an individual process, it is now seen increasingly as a collective accomplishment (Reynolds and Vince, 2004). In this article, we focus on one such collaborative practice, *collaborative reflection* in an organization (Prilla et al., 2012; Prilla and Blunk 2020), from an interactional perspective.

Fundamental to collaborative reflection is that it must be seen as a social process through which participants may find new perspectives or tools for developing their work (Prilla et al., 2012). That means people engaging in reflection are expected first to make their experiences explicit and then to share and negotiate them with co-participants, thus collaboratively making sense of the ideas in play (Prilla and Blunk 2020; Veen and de la Croix, 2016). In this respect, collaborative reflection is closely connected to the interests of researchers in the fields of workplace studies and CSCW, such as collective sensemaking (e.g., Stigliani and Ravasi, 2012; Bansler and Havn, 2006). The core of both of these work activities is to create order in organizational reality and to make joint sense of complex issues. However, according to Prilla and Blunk (2020), collaborative reflection goes beyond sensemaking, as the emphasis is not solely on building common understanding but also on how shared understanding of the experiences of the organizational actors may be translated into learning.

Following Veen and de la Croix (2016), we approach collaborative reflection as an interactional achievement. For collaboration to occur, the interactants need to engage in a coordinated activity through which they orient jointly to one

another and to their work tasks (see [van Osch and Steinfield, 2016](#)). That is, the actors in the process need not only to display their orientation to a common goal as the purpose of their immediate interaction, but also to build a connection to the larger work project which their individual tasks are designed to contribute to. These levels of coordination can be termed microcoordination, which focuses on the interpersonal coordination between the team members, and macrocoordination, through which more durable structures between people in the organization are established ([Swarts, 2016](#)). In this study, we focus on microcoordination, in which participants collaboratively reflect on their work and construct a shared understanding of the issues and practices they find to be in need of development. At the same time, however, we cannot ignore the larger scale coordination that shapes and is shaped by the outcomes of reflection. That is, we show how the microcoordination of reflection is enacted and how it is intertwined with the larger organizational project.

As in the context of collaborative writing (see [Clayson, 2018](#)), collaborative reflection is not done solely with language and/or the body but also with tools and technologies that may be intertwined. The central point, also highlighted in CSCW studies, is that different kinds of technologies varying from paper and pen to more complex digital systems are embedded in workplace activity and feature in interaction and work (see [Heath et al., 2000](#)). In the case of collaborative reflection, such tools become important, since in order to sustain and retrieve the outcomes of reflection, it is crucial that these collaboratively negotiated experiences are somehow documented ([Prilla et al., 2012](#)). However, during the process, different technologies and artefacts may also be used for other purposes as well as for documenting outcomes. For instance, [Stigliani and Ravasi, 2012](#) showed how individuals used several kinds of visual artefacts, such as whiteboards and sketches, to support both individual thinking and interactive communication in their work of constructing a novel understanding of a given organizational issue. In the following sections, we first show how digital media may be used as part of the collaborative reflection process. We then introduce some relevant research that has been conducted on collaborative practices in the workplace from an interactional perspective.

2.1. *Multimediality of reflection processes*

In order to facilitate many collaborative tasks in workplaces, including reflection, most modern organizations have adopted enterprise social media platforms in their daily work. According to [Leonardi et al. \(2013\)](#), these internal platforms resemble many social media networks in that they enable the posting, editing, and sharing of messages among multiple people. However, instead of public dissemination, they often support internal communication within an organization – either within a team or across teams ([van Osch and Steinfield, 2016](#)). Often the most useful function of these platforms is their possibility to make work activities and common interests visible to others in the organization ([Treem, Leonardi & van den Hooff, 2020](#); [van Osch and Steinfield, 2016](#)). That is, the visibility afforded by enterprise social media makes the activities and behavior of the members of the organization transparent, available, and “trackable” to both themselves and others ([Song et al., 2019](#)). Visibility of both the production and outcome of collaborative practices may thus help team members coordinate their reflection processes and share the results with other teams.

However, as pointed out by [Prilla and Blunk \(2020\)](#) in their study on collaborative reflection in an online medium, the achievement of online collaborative reflection is both an online and an offline process. In their study, they noticed that certain activities in a reflection process had been done outside of the digital system and therefore some traces and trajectories were absent in the online medium. To tackle the problem of the online/offline dichotomy, rather than studying work and interaction through a single isolated digital medium, we examined how actors in workplace interaction engage with an array of traditional (such as paper and pen) and digital media forms and the ways such media interact in practice to accomplish the task of collaborative reflection (see [Boczkowski and Orlowski, 2004: 9](#)). As [Orlikowski and Scott \(2016\)](#) note, organizational practices are permeated by multiple media that are intertwined and thus used together.

To demonstrate how various media are intertwined in collaborative reflection, we must delve into the process where people use these media in their interaction both in parallel and sequentially. Previous studies on collaborative reflection have shown that the process consists of multiple stages, such as individually writing down experiences, articulating them and documenting the outcomes ([Prilla et al., 2012](#)). However, many studies on reflection have focused on the outcome of the process and have not taken the interactional reality into account ([Veen and de la Croix, 2016](#)). Our study zooms into the different stages and demonstrates how each is constructed multimodally and multimedially in collaboration, and how each stage draws from previous stages, thus shaping both the form of the ideas presented and the meaning and function they acquire in workplace interaction. In other words, the focus is on examining how ideas generated in collaborative reflection travel from one medium to another. Therefore, we consider the multimedial process as a matter of remediation, which, as [Prior et al. \(2006\)](#) state, refers to the transformation of meaning across the chain of different media.

In our definition of media, we follow [Arminen et al. \(2016\)](#), who argue that all communication is mediated through language, body, technologies or other artefacts and thus there is no such thing as unmediated interaction. This means we consider all kinds of materialities carrying resources of communication as ‘media’ that enable and constrain different kinds of actions (see also [Kress and van Leeuwen, 2001](#)). In this sense, remediation is closely linked to the concept of recontextualization, which we understand in [Linell’s \(1998: 144–145\)](#) terms “as the dynamic transfer-and-transformation of something from one discourse/text-in-context to another”. The transferred elements can be anything from specific lexical items to more abstract entities such as discourses or ideologies. What is central in the concept is that the meaning of the transferred elements is unavoidably transformed as they are refitted into new contexts ([Linell, 1998](#)). Through the concept of remediation ([Prior et al., 2006](#)), we want to draw attention to the fact that chains of recontextualization often also involve chains of different media, and different practices of mediation.

2.2. Collaboration at work as multimodal interaction

Here we adopt an interactional perspective on workplace collaboration. Earlier interactional studies, mostly in the field of conversation analysis, have looked at various kinds of meetings, workshops and brainstorming sessions in organizations where workers are expected to take part in idea development, shared knowledge creation, collaborative planning or joint text production (e.g., Asmuß and Oshima, 2012; Nielsen, 2012; Nissi and Pälli, 2020). The existing research in the field has taken a multimodal perspective on these institutional encounters, which means that they have focused not only on talk-in-interaction but also on embodied interaction and the use of material artefacts as part of the shared accomplishment of organizational tasks (Nielsen, 2012; Asmuß and Oshima, 2012).

Studies of collaborative work practices have shown how collaboration is achieved through specific sequential patterns. For example, Nissi (2015), in her study of the writing of a joint document in a meeting, shows how the participants used proposal-acceptance sequences to make sure that they agreed on what they were writing (see also, Asmuß and Oshima, 2012). Yasui (2013), who studied brainstorming sessions, showed how proposals can be met with agreements, partial agreements, as well as proposals for alternative courses of actions. Wasson (2016) also notes the importance of agreement but points out that information requests and offers of information may also be part of collaborative decision making.

Some of these studies have drawn attention to interactional practices that specifically accomplish reflection. Nielsen (2012) shows how explaining and accounting for one's ideas is an important aspect of collaboration, while Veen and de la Croix (2016) draw attention to the interactional transition from telling one's experiences to reflecting on them. Both Nielsen (2012) and Veen and de la Croix (2016) point to the crucial role of the facilitator in initiating such reflective turns of talk. The facilitator guides the reflection process by distributing turns and urging the participants to share their thoughts. In our study, we show how different sequential practices were used in the various stages of the reflection process and the centrality of the facilitator in initiating those practices.

The embodied perspective of these studies means that they draw attention to the body as an important resource in accomplishing sequential activities. For example, Mondada (2016b) in her study of participatory democracy meetings describes the delicate embodied ways through which the facilitator displayed his sense of whether or not agreement had been reached on an issue. For example, the facilitator stated walking towards the whiteboard in order to write on it when he thought the participants were approaching an agreement but discontinued walking when he noticed that agreement was in doubt. Yasui (2013), in turn, shows how gestures were used when accepting, rejecting, and elaborating on proposals.

In addition to their bodies, participants in collaborative activities utilize material artefacts. Nielsen (2012) and Nissi and Pälli (2020), for example, showed how written paper notes or cards were used and how the fact that they can be easily moved is important for the ongoing activities. In Nielsen's (2012) study, notes written individually by the participants were arranged on a board to assist the participants to explain their ideas to the others. Nissi and Pälli (2020), on the other hand, investigated an activity where groups in a training organized their individual notes into a collective visual configuration that they then used to share their ideas with other groups. Embodiment and material documents, post-it notes in particular, also had a major role in our case study.

Some of the studies reviewed in this section analyzed activities in which digital tools were used (e.g., Asmuß and Oshima, 2012; Nissi, 2015; Oittinen, 2020). Their results showed how the different affordances of different tools had consequences for the participants' interaction. For example, projecting the computer screen on a whiteboard made it possible for the participants to monitor what was being written (Asmuß and Oshima, 2012; Nissi, 2015). The computer itself is also a material artefact, and through mutual orientation to the computer participants may display alignment with each other (Asmuß and Oshima, 2012; Oittinen, 2018). Jensen et al. (2018) analyzed how digital sticky notes were used and found, for example, that their easy movability led to flexible practices where notes were rearranged multiple times.

From the perspective of our focus on multimodality, however, it should be noted that these studies focused on temporally constrained interactional encounters. Digital tools have been treated as one resource among others, e.g., talk, gesture, and different material artefacts, that participants in encounters rely on as part of their multimodal interaction. However, ubiquitous digital technologies can also offer us a window on what happens before and after the moment they are used in face-to-face or digitally mediated encounters. Thus, if we analyze a digital platform as a *medium* rather than as simply a situated resource, it is possible to capture the broader interconnections between different media as well as the chains of activity that emerge at the intersections of multiple media. A similar point is made by Luff and Heath (2019), although their context of study was quite different from ours. They analyzed different kinds of traffic control rooms and highlight the shift that has occurred away from simpler environments where workers are in the same location to more complex arrangements where work is done by teams that are distributed in different locations. Although various technologies are used in the former case as well, the latter is more complex in that technologies provide a link between dispersed professionals. For example, Luff et al. (2018) show how a technologically mediated 'incident log' emerged and was used across time by different individuals and teams. We also see digital tools as both situated resources in multimodal interaction and as media whose influence extends beyond situated encounters.

3. Data and methods

Our data derive from a development project in a large private organization that has to do with a major change in the organization's information system. We are interested in the work of one of the teams, which is responsible for training the

members of the organization. The team is, however, closely connected to the other teams working on the same project. The relation between these teams is evident in the task we examine in this study: The teams have been asked to reflect on the progress of the ongoing project, and to suggest what they would like to change with regard to the project and why. The teams were expected to first reflect on their work among themselves and then submit the issues that emerged for discussion together with the other teams and with the upper management in charge of the project. Here, we zoom in on the collaborative reflection process of one team in a large multi-team project by examining how they go about reflecting on their work and how they position themselves as members of the team vis-à-vis the project as a whole.

An important part of the work of the selected team concerns the regular organization of face-to-face workshops and the use of a digital platform called Howspace, which is a collaborative tool that has been especially designed for facilitator-led workshops. The platform is promoted as a social media-like environment that supports participant interaction. The platform is used by the team solely for internal use, which means that the members of other teams do not see the content published on it, unless the team makes this available by sending them a link to the platform. Howspace is mainly used during workshops, when the participants' activity is guided by an internal facilitator, who, e.g., sets the assignments and updates the content of the platform.

Crucially, for our purposes, the task is carried using several media: as well as the digital platform, the participants also employ handwriting on post-it notes and talk-in-interaction. The data we analyzed for this article derive from both a video-recording of the workshop and screenshots from the platform. Focusing in detail on complex case allowed us to delve into how different media come into play in the accomplishment of organizational practices.

Methodologically, our study is based on conversation analysis, which means looking at contributions to interaction as part of their sequential context (see, [Schegloff, 2007](#)). We use analytic tools from both multimodal conversation analysis ([Mondada, 2016a](#)) and digital conversation analysis ([Giles et al., 2015](#)) to examine how participants' contributions are not only verbally but also bodily, materially, and digitally accomplished. At the same time, these approaches enable us to analyze the ways in which the affordances of the chosen medium are procedurally consequential for the participants' actions (see [Arminen et al., 2016](#)). In particular, the use of conversation analysis enables us to study the interaction as fundamentally constituted from the facilitator's initiatives and the other participants' responses to these. We also look at how the participants, in their responses, display their orientation to previous responses by other participants and how their turns are sequentially and temporally organized to advance the collaborative task at hand. We focus on the sequences in which participants accomplish the activities of recontextualization and remediation, that is, where they reuse existing elements in a different context and/or medium. By examining these activities in detail through the lenses of conversation analysis, it is possible to analyze remediation as a joint accomplishment, and further, the ways in which different media feature in the production of collaborative reflection.

4. Recontextualization of an idea through a multimedial activity chain

Before proceeding to a detailed analysis of collaborative reflection by the team, it is important to acknowledge the larger organizational context in which the reflective work takes place. As described in the data section, the results of the reflection process reported for this article are to be used in a joint meeting between teams and management, where joint 'priority areas' will be decided on for the whole project. Interestingly, in their later workshop, the present team discusses these 'priority areas'. Thus, they display an orientation to the organizational outcomes of their reflection work. The following excerpt shows how the facilitator raises the matter in the workshop. The excerpt motivates our upcoming analysis as it shows the organizational relevance of the team's reflection work.

- 01 EVE: **↑mitäs ajatuksia teillä herää tästä?**
what thoughts do you have on this?
- 02 (3.0)
- 03 **jös muistatte sen meidän van-**
if you remember that of our ear-
- 04 **vanhemman pohjatyöskentelyn nii.**
earlier preliminary working then
- 05 (2.0)
- 06 **vastaako nämä kehitysalueet**
do these priority areas now correspond to
- 07 **nyt siihen mitä me haluttiin sanoa?**
what we wanted to say?

Before the excerpt the facilitator, Eveliina, has introduced the 'priority areas' that had been formulated at the joint meeting of the project involving other teams and the management. In the excerpt, she asks the team members to share their ideas on

these priority areas. The excerpt reveals two important aspects with regard to organizational collaborative reflection. First, it shows that the preliminary reflection work the team has done in their internal workshop is expected to have an impact, i.e., it is important for them that the priority areas of the whole project ‘correspond to’ the results of their ideas. Second, it shows that it is crucial for the team to gain a joint understanding of these organizational issues in order to make their voice heard in the project. Thus, Eveliina positions the team as an entity and their ideas as shared (‘what we wanted to say’).

In the analysis sections that follow, we take a step backwards and show in detail how the participants in an internal workshop take part in collaborative reflection, and how they construct a shared understanding of the organizational problems in question by simultaneously constructing their team as a unified “we”. We show that this process of ‘doing organizational reflection’ includes activities of remediation and recontextualization through which personal ideas evolve into a collective understanding.

First, we identified the stages of the collaboration process. We found a total of nine distinct stages characterized by the use of multiple media. The stages are shown below.

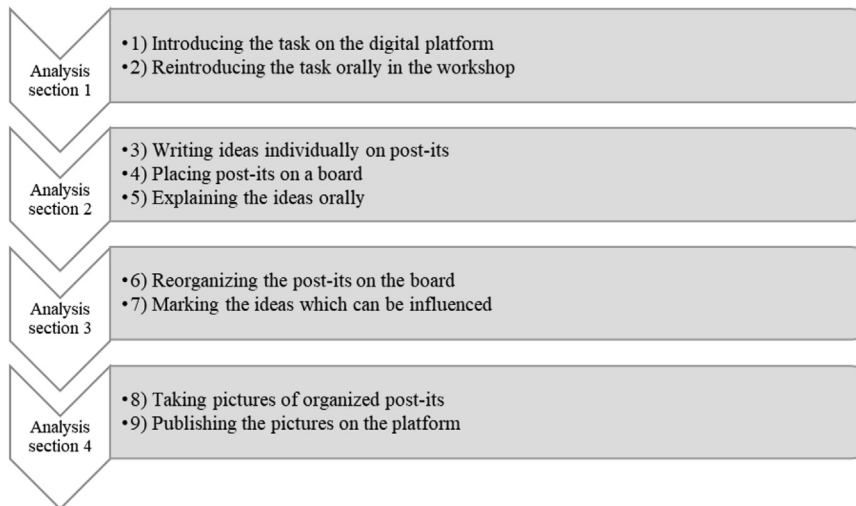


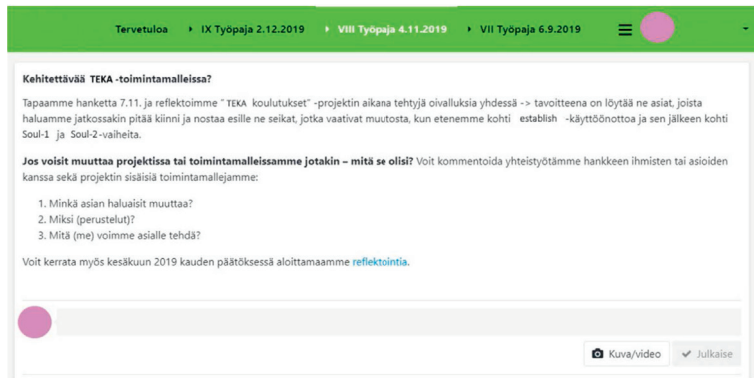
Fig. 1. The stages of collaborative reflection.

These stages are somewhat similar to those found in previous studies on collaborative reflection, including the individual writing down of ideas, explaining them and documenting the outcomes (Prilla et al., 2012). In the next subsections, we demonstrate some of these stages in detail. We show that different media are used in different stages of the task for different purposes: while post-it notes as tangible and editable objects are useful for turning thoughts into writing as well as for organizing and reorganizing activity, talk may be used for taking responsibility for the ideas on the notes by explaining them more specifically. Finally, the digital platform may be used for stabilizing the meaning of collectively generated views as well as storing and sharing them. We also show how participants construct an understanding of organizational issues step-by-step during the multimedial activity chain. At the same time, the ownership of ideas changes: individually written ideas evolve into shared views.

4.1. *Introducing the task: anticipation of the recontextualization process*

The task that we analyze in this article had been introduced on the digital platform before the face-to-face workshop. In extract 1a, we show a screenshot of the platform and a translation of the most relevant part of the introduction. Although digital contributions may differ from oral interaction in that they do not necessarily require responses from recipients, they can also be analyzed using conversation analytic methods (see Giles et al., 2015). We show what kinds of activities the introduction of the task projects from the participants and how the introduction of the task anticipates the recontextualization process where individual ideas eventually turn into shared views.

Extract 1a



Development needs in TEKA operation models?

We will meet the project management Nov 7 and reflect together on insights gained during the "TEKA trainings" project -> our goal is to find the things that we want to hold on to in the future and to bring up those aspects that require change, as we proceed towards *Establish* initialization and after that towards the *Soul1* and *Soul2* stages.

If you could change something in the project or in our operation models – what would it be? You can comment on our cooperation with the people or issues in the project as well as on our internal operation models:

1. What would you like to change?
2. Why (reasons)?
3. What can we do about it?

The introduction has two parts (one paragraph for each): first a general introduction, then a more detailed one. The general introduction in the first paragraph explains the organizational rationale for the task and thus functions as background information that motivates accomplishment of the task. The paragraph comprises two sentences linked by an arrow that depicts the organizational relationship between their content, i.e., the fact that there is going to be a meeting with the upper management of the project entails the need to come up with both things to 'hold on to' and things to 'change' in the project. Thus, the introduction informs the team about the results of the task will be used for on the organizational level. It is also interesting that the task is introduced using inclusive we. Thus, the goal is to find a shared understanding of the relevant issues.

In the second paragraph, the task is introduced in more detail through questions. First there is a more general question, which is then specified through three numbered questions. These questions foreshadow the development from individual to shared ideas. In the first numbered question – as well as the general question – the subject is – in Finnish – in the familiar second person singular (translated as 'you'). That is, the question is directed to the participants as individuals: what would each of them like to change in the project. In the third question, however, the plural pronoun *me* 'we' is used in the inclusive sense. Thus, the action of actually changing things is attributed to the participants as a collective.

If we look at the linguistic form of the introduction, it is clear that it projects a response from the participants. First, questions anticipate answers. Second, the formulation *voit kommentoida* 'you can comment' assumes that the participants engage in 'commenting'. Interestingly, however, the introduction does not detail how answering the questions or 'commenting' should be accomplished in practice. The chat function of the platform has been made available, which would make it possible for the participants to do the task beforehand and record their answers in the chat, but there is no instruction in the text for them to use the chat. In reality, this affordance of the platform is not used: no one does the task beforehand. Rather, most of the task is accomplished during the face-to-face workshop. In the workshop, the facilitator also reintroduces the task orally. In so doing, she uses the introduction on the platform as the basis for her oral introduction. She performs the introduction in three stages, as the activity unfolds, in accordance with the three questions on the platform. Moreover, the platform is visually available on a large screen throughout the meeting.

In extract 1b, we show how she reintroduces the first part of the assignment, and how the participants begin to orient towards accomplishing it.

Extract 1b

- 01 EVE: **ni (1.0)**
so (1.0)
- 02 **otetaan *niitä isoja postit-lappuja ja, (1.5)**
let's take those big post-it notes and, (1.5)
*TII STARTS TAKING POST-IT NOTES FROM THE TABLE
- 03 **mun toive olis et jokanen (0.5)**
my wish would be that everyone (0.5)
- 04 **↑jokanen *kirjais (.)**
↑everyone would record (.)
*ANT STARTS TAKING POST-IT NOTES
- 05 **ois ensin niitä asioita että, (2.5)**
would be first those things that, (2.5)
- 06 ***↑mitä sä haluaisit muuttaa, (.)**
↑what would you like to change, (.)
*TOM STARTS TAKING POST-ITS (FIG. 2)
- 07 **ihan mihin tahansa liittyen.**
regarding anything at all.

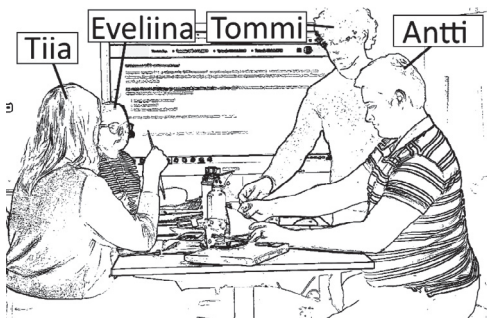


Fig. 2

Firstly, it is noteworthy that the facilitator, Eveliina, repeats question 1 on the platform almost verbatim (line 6). She also uses the singular second person pronoun *sä* 'you', thus maintaining the platform's focus on individual ideas. However, she reframes the assignment in that she introduces a new medium, post-it notes, through which the task will be actualized. This is done through two directives that call for two physical activities by the participants. In the first directive she asks the participants to 'take' the post-its (line 2), projecting that the participants reach for the post-its that are on the table. In the second, she suggests that they 'record' (line 4) their thoughts on post-its, thereby projecting the act of hand-writing. This second directive is formulated as a personal wish (line 3). The extract also shows how the participants start responding to the first directive. While Eveliina is speaking, three of them reach for and take post-its (lines 2, 4 and 6). In figure 2, we can see the position of Tommi's right hand as he starts taking post-its from the table. Later (not shown) they also respond to the second part of the directive and write on the post-its.

In summary, we observed how the way the task was introduced in the digital platform made it clear that the workshop participants were expected to accomplish collaborative reflection through first presenting their personal views and then transforming these into shared ideas. Our analysis also showed that only some of the affordances of the digital platform as a medium were used. For example, the affordances of accessibility and retrievability turned out to be important, whereas the interactional affordances of the digital technology were not used. Rather, the task was reintroduced in the face-to-face workshop and a different medium, post-its, brought into play. As we later show, this medium has a set of affordances that differ from those of the digital platform in important and consequential ways.

4.2. From written ideas to talk: displaying ownership of one's idea

After the participants have written their ideas down, the facilitator instructs them to place the post-it notes on a board and to turn their written ideas into talk. This stage of the multimedial activity chain is related to the second question on the platform ('Why (reasons)?'). Here, the facilitator has a central role in initiating the activities of collaborative reflection in the workshop. This is evident in the ways she guides the group members one after the other to present their notes and to elaborate on what they have written. She initiates the proceedings by gazing at and naming the person she wants to take the floor. Extract 2a shows how this work of turning written notes into talk was accomplished.

Extract 2a:

- 01 EVE: **mut annetaaks me vaik No- N-**
but do we let for example No- N-
- 02 ***uskallaks sä Noora vaik ¢alottaaf**
do you dare to ¢begin Noora
 *E Gazes at N
- 03 **et mit- esitteleks sä *sun omat laput?**
so wha- would you present your own notes?
 *E Shifts gaze from N to the board
- 04 NOO: ***mun omat laput.**
my own notes
 *N Stands up
- 05 EVE: **voidaan samal vähän *ryhmitellä et**
we can do grouping a little bit at the same time so
 *E Moves her hand between the notes
- 06 **mitä siel- jos me löydetään samoja (.)**
what ther- perhaps we'll find some of the same (.)
- 07 **samoja teemoja.**
same themes.
- 08 NOO: **jojo no**
ye[s well]
- 09 EVE: **[mitäs sul oli]**
[what did you have]
- 10 NOO: **mun laput on *nait keltasii**
my notes are these yellow ones
 *N Points at post-its on the board (Fig.3)



Fig. 3

- 11 **tääl *alhaalla↑**
down here
 *E Follows the hand movement of N
- 12 EVE: **joo**
yeah

In the workshop, post-it notes were used to support the documentation of individual experiences by forming a material base that may be used for revisiting to experience and turning it into reflective talk. Extract 2a, shows how individuals' written-down ideas can be turned into talk and their ownership made relevant. First, the facilitator asks Noora to take the floor through multiple requests for action. The manner in which the facilitator's third request (line 3) is designed underlines the requirement that participants display their ownership of the idea on the post-it note. Eveliina asks Noora to introduce her *own* post-it notes, thereby making the display of personal ideas relevant. However, sharing one's individual view of the topic is treated here as a potentially delicate issue, as can be seen in the way Eveliina reformulates the request: in fact, the first request is addressed to all the participants as a question about the running order (*do we let*). Her first reformulation of that request (line 2) is addressed to Noora, in which she makes it more explicit that either sharing individual thoughts or being the first one to do so may somehow be a sensitive matter. She does this with an interrogative request asking about Noora's courage to do that (*do you dare to begin*). Finally, she reformulates the request with another other-oriented interrogative form (*would you present*), which is more clearly related to the immediate task, and thus

straight away makes the acceptance or rejection of the request relevant as a next action. (On request formats, see Fox and Heinemann, 2016).

Noora consents to the final request by getting up and recycling the words from the previous turn (line 4). She claims ownership of the ideas by identifying the post-its by their color and their position on the board (lines 10–11). By pointing at her post-it notes (fig. 3), she guides the other participants to distinguish them from the other post-it notes. During Noora's turn, Eveliina follows the movement of Noora's hand with her own (fig. 3), registering ownership by slightly pointing to the board and by the verbal confirmation *joo* 'yeah'. Thus, it is worth noting that the action of claiming ownership of one's notes is unavoidably multimodal: it is contingent on the material configuration of the notes on the board and the physical positions from which the other participants have visual access to the board. Thus, to show which notes they have written and therefore to take responsibility for them, the participants need to locate them in embodied ways, through touching, pointing, or gazing. This is in line with the observations of both Nielsen (2012) and Nissi and Pälli (2020) that when their ideas become public, individuals also become accountable for them.

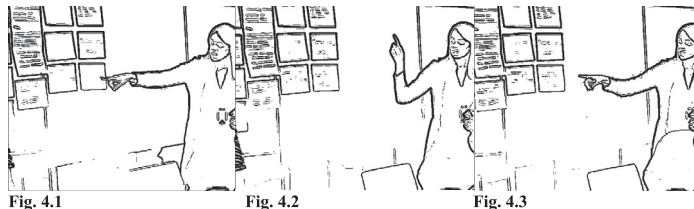
Extract 2b demonstrates how the recontextualization process of translating a written post-it note into talk is accomplished. Prior to the extract, Noora has introduced and explained two of her written ideas and now moves on to her third idea.

Extract 2b



The changes decided in the project →
how to the knowledge of Tuomikari easily?

- 01 NOO: *sitte mä nostin että .hh *jos hankkeen
then I raised the point that .hh if changes
*N POINTS AT A NOTE ON THE BOARD (FIG. 4.1)
*N WITHDRAWS HER ARM (FIG. 4.2)



- 02 puolella on tehty jotain muutoksii
have been made on the project side
- 03 et *miten se tulis meidän tietoon
then how would it come to our knowledge
*N POINTS AT A NOTE (FIG. 4.3)
- 04 ketterästi↑ *ja
easily↑ and
*N GAZES AT E AND LEANS AWAY FROM THE BOARD
- 05 EVE: [°erittäin hyvä°
[°very good°
- 06 NOO: *[yhen esimerkin voisin nostaa että
[I could raise an example that
*N PUTS HER HAND DOWN
- 07 siel oli vaik päätetty et joku termi
they had decided for example that some term
- 08 muuttuu *isosti ja sitte
would change greatly and then
*EVE, LAU AND TII NOD

- 09 **e-tekan *puolella se sitte taas**
on the e-teka side it then in turn affect
 *N TOUCHES HER FIRST NOTE
- 10 **vaikuttaa aika paljon *siihen *materiaaliin,**
that material quite a lot
 *L NODS
 *ANT NODS
- 11 **et miten ne [asiat on**
like how those things are
- 12 EVE: **[kyllä .hhh**
 [yes .hhh
- 13 NOO: **sanottu että *miten**
said so how
 *N CIRCULAR GESTURE ABOVE THE NOTE (FIG. 5.1)
 *T NODS
 *E TAKES A STEP TOWARDS BOARD



Fig. 5.1

Fig. 5.2

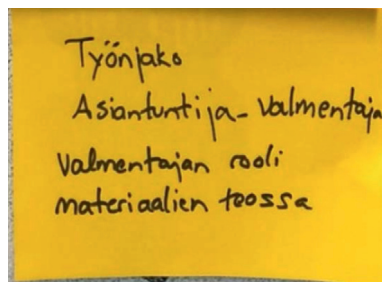


Fig. 5.3

- 14 ***[se (0.5) *tulee (---)**
 [would (0.5) it come (---)
 *N TURNS HER PALM OPEN (FIG. 5.2)
 *N MOVES HER PALM TOWARDS HERSELF (FIG. 5.3)
- 15 EVE: ***[ja liittyy myös**
 [and that's also related to
 *E TOUCHES THE NOTE
- 16 **meiän koulutusmatskuihin**
our training materials

In the extract, Noora takes advantage of the availability of mutual visual access by pointing at her post-it note on the board and orally reformulates its content, thereby reconstructing its meaning. In other words, the idea is not only recontextualized from one context to another but also remediated from one medium (post-it note) to another (human voice). In these overlapping processes, not only are the communication modes changed from text to talk but there is also a shift from a depersonalized written note to a more personalized oral statement (see [ledema, 2001](#)). The personalization process in Noora's turn is twofold: first, since the post-it note does not reveal who owns the idea,

- 15 **liittyy elikkä tosiaan työnjako**
of the same thing that is the division of labor
- 16 **niin ku asiantuntijan ja valmentajan**
like between the expert and the coach
- 17 **kesken että mikä se valmentajan rooli**
so what has the role of the coach here been
- 18 ***siin materiaalin teossa niin ku tässä on ollu,**
like in the making of the material
*E PUTS 'TRAININGS'-NOTE ON THE BOARD AND T'S
'AIM AND PURPOSE'-NOTE UNDER THAT
- 19 **et niin ku Tessa just sano**
so like Tessa just said



Division of labor
The expert – the coach
the role of the expert in making of the material

while still organizing the post-it notes, Eveliina can not only progress the organizing process but also manage speaker transition (see [Nielsen, 2012](#)). Although the reorganizing activity continues, Eveliina's 'all right' (line 9) acts as a pre-closing utterance that signals the ending of the talk about this particular post-it note and moving on (see [Schegloff and Sacks, 1973](#)).

The order in which ideas are discussed is negotiated in a sequence initiated by Eveliina (line 10). She turns her head away from the board and faces the members of the group who are sitting on Tessa's side, thus anticipating that the participants proceed in accordance with the seating order. Tessa looks at Antti, thus giving him the floor. At this point, now that two participants have already explained their cards, the pattern of the task as well as the social actions required are recognizable to the participants. In order to elicit talk from the next participant, Eveliina simply asks 'who will continue?' (line 10) without specifying what that person is expected to do. In lines 11–12, Antti takes the floor and makes explicit the suggestion of proceeding in order.¹

At the same time, speakers begin to link their ideas to other participants' notes. In extract 3, Antti shows that his idea is not wholly novel but related to the previous turn by Tessa. First, in the lines 14–15, he explains that his idea is connected to what has been said earlier. Second, in his talk, Antti uses the demonstrative pronouns *se* and *siin* (lines 17–18), which are not present on his written post-it. They can be considered here as components that resemble definite articles and show that the idea in question is already known (see, [Laury, 1997](#)). The utterance *niin ku Tessa just sano* 'as Tessa just said' explicates the similarities between the ideas and makes it visible that Antti is listening and orienting to the ongoing discussion. In so doing, Antti performs at least two significant actions: first, he positions himself as a co-producer and constructs his ideas as collectively shared by the members of the organization. Second, he avoids a possible problem with tellability: since the ideas are similar, he needs to minimize the newsworthiness of his ideas by framing them as overlapping with others' ideas (see [Nissi, 2015: 8](#)). In this way, the team members organize their ideas and construct their relationships with each other through their talk.

The next step in the activity chain is to mark the ideas over which the team can have some influence. In this stage, the facilitator asks the team members to propose such ideas, which she then marks by drawing a spot on the post-it in question.

¹ Antti seems to refer to the placement of the post-it notes on the board rather than the seating arrangement. However, both the seating arrangement and the placement of post-it notes project Antti as the next speaker.

Extract 4 shows how the ideas are no longer identified according to their author but cited with regard to their content. In addition, this stage shows how the post-its' affordance of editability enables the task to be accomplished.

Extract 4:

In line 1, Laura brings up a new idea for consideration by the team. This is indicated by the turn-initial particle pair

- 01 LAU: [ja] sit toi palaverien määrä
[and] then the number of meetings
- 02 EVE: *(2.0) mmm
(2.0) mmm
*E LOOKS FOR THE NOTE WITH HER GAZE AND HAND
- 03 LAU: toiminta*mallissa (.) siellä.
in the operation* model (.) there.
*E LOOKS FOR THE CATEGORY OF 'OPERATION MODEL'
- 04 EVE: *°tuolla° (.) *kyllä. (3.0) ei pidetä
°there° (.) yes. (3.0) not having
*E TOUCHES THE NOTE
*E BENDS DOWN TO MARK THE NOTE (FIG. 7)



Fig. 7

- 05 EVE: turhia palavereja ja sitte
unnecessary meetings and then
- 06 *tää (2.0)
this (2.0)
*E UNDERLINES 'CLEAR AIMS' ON THE NOTE
- 07 TES?: °mm°
°mm °
- 08 EVE: tavotteet ja agenda. *↑ja sit
aims and an agenda. ↑and then
*E STANDS UP

ja sit 'and then', which marks the topical shift from one idea into another while also indicating that the turn is related to the action chains of suggesting ideas (see VISK §1030). By using a deictic marker, i.e., the demonstrative pronoun *toi* 'that', prior to 'number of meetings' while gazing at the board, Laura shows that a referent (i.e., the post-it note) is available to all present. At the same time, the turn can be seen acting as a request that Eveliina do

something to the referent. (see Laury, 1997: 74). Eveliina complies by beginning to look for the post-it note under discussion (line 2).

It is noteworthy that Laura uses ready-made labels to guide the facilitator in navigating between multiple post-it notes by referring to one of the categories (*toimintamallissa* ‘in the operations model’) as an umbrella term for the idea in question (line 3). This shows how the labeling of post-its stabilizes the notes as members of the category under which they have been grouped in. How Laura now refers to the post-it note shows that the ownership of ideas is no longer relevant. It is more important that the view is collectively accepted as part of a specific category. In turn, by marking the note (fig. 7), Eveliina acknowledges Laura’s suggestion as a potentially influential idea. The facilitator thus positions herself as a co-producer by confirming the idea both bodily and verbally (line 4). First, she reads aloud one part of the note (lines 4–5) and continuing by adding *ja sitte* ‘and then’ (line 5). She then reads aloud another relevant part of the note suggested by Laura and further emphasizes its relevance by underlining the words ‘clear aims’ on the note. The tailorability of post-it notes and the way with which they can be marked during the ongoing conversation enables the facilitator to make changes to ideas, that is, to separate those that have the potential for influence from those that do not.

Summing up this section, we have shown how the ownership of ideas changes after individuals’ post-it notes have been introduced orally. It is only after they have been explained that post-it notes can be moved from their original place to their relevant category representing a broader organizational issue. In this stage of the reflection process, the participants utilize the affordances of the combination of the board and post-it notes that enable ideas to be rearranged, thus transforming them from individual and personal views towards more shared and stable meanings. The extracts show that it is not the facilitator alone who reorganizes notes but that other participants also take part in the activity by constructing the relations between the notes as they discuss them.

4.4. From physical to digital form: stabilizing ideas as collaborative reflection

The final two stages of the activity chain consist of the facilitator photographing the collection of post-it notes on the board and then after the workshop publishing these pictures, with captions, on Howspace. It is worth noting that in this remediation process from textual artefacts into digital form, the ideas are no longer referred to as individual contributions but as a collaboratively constructed and collectively shared understanding of specific organizational problems. The final stage shows how the different voices of the group members heard during the task through multimodal means have now become blended together as joint views. The subtle ways of showing agreement with other participants in the previous stages are now made explicit by the facilitator in and through the digital platform.

Extract 5



The overall picture of our ideas: these things we would like to change

The post-its marked with dots were the ones on which we feel that we in particular have or should have a possibility to influence. We will strive to promote every one of these aspects in further work with the project. We will tell you later about the observations and insights of the event on 7 November with Noora, Tiia and Rauli.

The screenshot from Howspace shows two crucial aspects of the reflection process. First, it shows how the captions frame the collection of post-it notes as something shared, that is, as collaboratively reflected. Second, it shows that the ideas will be used in the future, that is, that they matter in the larger organizational context. In extract 6, Eveliina states, using first-person plurals (e.g., ‘the overall picture of *our* ideas’) that the ideas have been constructed together. As shown in the very first excerpt, it is crucial that the team has a joint understanding of the problems in order to be heard in the project. The above extract demonstrates how such a unified ‘we’ has been constructed: the individual ideas have been stabilized as shared views through a remediation process in which the post-it notes have been represented as a unified collection. [Iedema \(2001\)](#) shows how different material artefacts have the power to detach views from dynamic talk-in-interaction and recreate them as more durable manifestations. The posted picture with captions can be considered an example of this kind of ‘durable manifestation’ that turns a process into an outcome. In addition, it provides stability and retrievability, which are important features, as these ideas will be discussed further with the upper management. The promise of making these ideas salient to the larger project can be seen in the future-oriented comment in the caption (‘we will strive to promote every one of these aspects in further work with the project’). These kinds of digitally documented entries facilitate a return to past experiences or discussions ([Prilla et al., 2012](#)).

In organizations, such entries may be used and recycled multiple times for various purposes often leading to a transformation of the original talk/text into an organizational document. For example, [Spee and Jarzabkowski \(2011\)](#) show in their study on the recontextualization of a strategic plan that in their transformation from talk into materialized text, ideas and views tend to detach from the situational context in which they were produced. However, in our case, the original author of the idea is not completely erased; instead, ownership simply shifts from ‘my idea’ to ‘our idea’. That is, although ideas are presented as jointly developed, the contributions of different individuals to the result of the collaborative reflection process remain visible. Howspace enables the remediation of post-it notes from the board to the digital platform in their authentic form. Capturing written ideas in this way retains individuals’ handwriting and give clues about the reorganizing activity through which collective understanding has been constructed. At the same time, the pictures posted on the digital platform freeze the outcome of reflection, as the participants can no longer reorganize or edit their post-it notes. The digital platform affords better possibilities than the post-it notes themselves for the storing, retrieving, and sharing of ideas (see [Jensen et al., 2018](#)) and thereby making them accessible to others over time and space. In short, the example demonstrates how digital devices may be used to “upgrade” a traditional medium and extend its possible uses.

5. Conclusion

This article reports on a new way of studying media use in organizations. The overall research aim was to examine multimodality in everyday organizational activities and the roles of different media in facilitating the work of collaborative reflection. The empirical analysis reported here focused on the reflection of just one team among other teams working in a large development project. The analysis revealed in detail how collaborative reflection was accomplished in the team’s workshop activities and how both traditional and digital media were used to support this process. The results show how, through interactive reflection, the ideas generated and presented by individuals were turned by the team into joint understanding.

Our analysis showed in detail how the task of collaborative reflection was accomplished through multiple stages through which the participants’ ideas were recontextualized step-by-step. In the first stage, we showed how the facilitator introduced the task by using the instruction on the platform as the basis for her oral presentation and how the expected outcome of the reflection task was already anticipated. In the next stages of the task, the participants wrote their individual views down on post-it notes, put them on the board, and in turn explained them. In this stage, ownership of the ideas became relevant, and the key words written on the post-its were framed by personal experiences and attached to the joint organizational reality of the team. After being explained, the notes were ready to be reorganized and categorized on the board. In this stage, the different voices of the group members started blending together. Finally, photographs of the reorganized collection of post-it notes were published on the digital platform where they were represented as explicitly collective views that could be shared with the upper management.

The findings of the study provide insights both for interactional studies on collaborative practices in workplaces and for studies on reflective work in organizational contexts. In both areas, the value of our contribution hinges on the multimodal perspective that we adopted for the study. In the domain of interactional studies, our study confirms the multimodal nature of collaborative practices noted previously (e.g., [Nissi and Pälli, 2020](#); [Nielsen, 2012](#)). To accomplish their joint task, our participants employed both embodied and material resources, such as gestures, gaze, or pen and post-it notes. However, in addition to multimodality, we drew on the concept of multimodality to show that interaction is always somehow mediated, and that the chosen medium has an impact on the interaction. For example, our study showed that post-it notes on a board play a key role in negotiating the ownership of ideas generated in the situation, as they may be used both as prompts for verbal and/or bodily explication by the author and as a way of detaching the idea from the original author through their

manual repositioning. In particular, these activities are afforded by the stickiness of the post-it notes, which enables them to be fastened and reorganized on the board. Furthermore, by analyzing the digital platform not only as a situational resource but also as a medium, we were able to shed light on the activity chains that evolve through the use of different media. More specifically, the digital platform as a medium also offered us a window on what happens before and after the moment they are used in face-to-face encounters.

The findings reported here also shed new light on collaborative reflection and how it is accomplished in and through interaction. Our analysis highlighted the collaborative and multimodal character of reflective processes in workplaces. A shared understanding of complex organizational issues was achieved in a step-by-step process in which the reflecting participants drew on each other's actions when progressing the task in a multimodal environment. Moreover, it was not the verbal contributions alone that produced reflection: the embodied ways of pointing and touching as well as moving and being seated in a space also had a major role in turning individual ideas into collaborative reflection. Our analysis indicates that collaborative reflection requires making distinctions between 'us' and 'them' in order to include both the work of making the reflection relevant for the organization and the building of an in-group from whose viewpoint the issues can be dealt with.

In our data, the collaborative reflection task was accomplished through a concatenation of actions, which were conducted with the help of different media. Participants used multiple tools and media to support their various reflective activities, such as thinking, explicating, and sharing their experiences. For example, post-it notes were used to facilitate both individual thinking and explaining ideas. In conducting these reflective actions, the facilitator of the workshop had an important role. These results accord with those of prior studies which have shown the importance of the transition from case presentation to case discussion (Veen and de la Croix, 2016) and that the process can be supported with digital applications designed for reflective work (Prilla et al., 2012; Prilla and Blunk, 2020).

However, in our study we addressed the role of enterprise social media used in naturally occurring interaction and showed in detail how the process of collaborative reflection is a matter of both online and offline interaction (see Prilla and Blunk, 2020). By analyzing interaction exclusively on the digital platform or in a face-to-face encounter, we would not have captured the entire multimodal activity chain, as the most relevant actions were accomplished between talk, written text, and the digital platform. By drawing on the concepts of remediation and recontextualization, we were able to zoom in the process and see what happens between these stages of reflective activity. As shown in the analysis, collaborative reflection is a process in which remediation has a central role in transforming ideas into texts, and written texts into talk and further into digital recordings. The findings indicate that in addition to the transition from telling experiences to reflecting on them, through which 'cases' are transformed into 'comprehensible topics', the transition from case discussion to case recording is also a relevant step. In this transition, ideas are frozen into a shared outcome, as was done in our data through digitalizing the collection of post-it notes. The present study thus highlighted a crucial stage in a characteristic organizational chain, where organizational issues gradually move from discussions to documents and possibly thereafter towards practical outcomes (see Iedema, 2001; Spee and Jarzabkowski, 2011; Nissi, 2015).

The results of this research support the idea that people in workplace encounters often engage with a range of traditional and digital media (Boczkowski and Orlikowski, 2004), and that also traditional media have a central role in today's increasingly digitized workplaces. However, new kinds of digital tools are rapidly being designed for facilitating collaborative work tasks, and hence to fully understand the implications of the affordances of different media for the reflection process, further research needs to be done on situations in which multiple media are used. The findings thus suggest, as a practical implication, that it is crucial when designing such processes to think carefully about the affordances of different tools and how they fit into the different stages of those processes.

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Appendix. Transcription symbols

| | |
|----------------|---|
| . | Falling intonation |
| ? | Rising intonation |
| ↓ | Fall in pitch |
| ↑ | Rise in pitch |
| word | Emphasis |
| >word< | Faster pace than surrounding talk |
| <word> | Slower pace than surrounding talk |
| WORD | Loud talk |
| °word° | Quiet talk |
| wo:rd | Lengthening of the sound |
| wo- | Word cut off |
| #word# | Creaky voice |
| @word@ | Change in sound quality |
| \$word\$ | Smile voice |
| hehe | Laughter |
| .hhh | Inbreath |
| hhh | Outbreath |
| hh(h)h | Outbreath produced through laugh |
| [| Beginning of overlapping talk |
| * | Beginning of overlapping nonverbal action |
| = | No pause between two adjacent utterances |
| (0.5) | Pause in seconds |
| (.) | Micro pause (less than 0.2 s) |
| (word) | Item in doubt |
| (-) | Talk not heard by transcriber |
| ((word)) | Transcriber's remarks |
| Turns his head | Nonverbal action |

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