Feedback and instructional guidance in healthcare simulation debriefings

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Feedback and instructional guidance in healthcare simulation debriefings

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Abstract

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The overall interest of the thesis concerns how students reflect upon and provide feedback on their own performance under the guidance of teachers. This interest is explored in the context of debriefing conversations that followed on simulation-based team training scenarios for healthcare students. The thesis is informed by ethnomethodology and conversation analysis, two closely intertwined perspectives with roots in sociology. The empirical material consists of video recordings of simulation-based training conducted at two Swedish universities. In addition, video data of feedback conversations for students at a Norwegian upper secondary school is used as a basis for investigation and comparison in one of the empirical studies. The thesis addresses questions related to how the teachers, referred to as facilitators in the setting under study, work to elicit and guide student reflection and feedback, how the students approach and accomplish such tasks, and how conceptual models and principles of "good practice" feature in the activities. These questions are scrutinised in three empirical studies. Study 1 shows how video in combination with instructional questions by the facilitators is central to how the students perceive and talk about their own simulation performance. Study 2 demonstrates the characteristics and differences between student and facilitator feedback, and what instructional functions the facilitators' feedback contributions fulfil in relation to those of the students. Study 3 examines and compares sequences in which students in two different settings assess their own performance in response to teacher questions with the aim to demonstrate the divergence between the real-time organisation of these activities and the models and principles advocated in the pedagogical literature. Overall, the results show that self- and peer feedback

are complex activities that present students with difficulties of both interactional and subject-matter character. Teachers therefore have a central role in initiating and setting the agenda for the feedback discussions, keeping them active and on track, directing the students' attention towards relevant aspects of their own performance, and demonstrating how these aspects are related to principles, standards and discourses of the students' future professional practice.

Contents

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Part one: Feedback and instructional guidance in healthcare simulation debriefings

1. Introduction

The research reported in this thesis focuses on educational activities in which students reflect upon and give feedback on their own and each other's performance under the guidance of teachers: a practice that is considered beneficial to enhance learning and achievement of a variety of competencies and skills (see, e.g., Andrade & Valtcheva, 2009; Boud, 1995; Dochy, Segers & Sluijsmans, 1999; Nicol & MacFarlane-Dick, 2006; Topping, 2009). Over the past decades, there has been a slow but yet clearly noticeable shift in the conception of feedback: the previously dominant view of feedback as one-way information transmitted from teachers to students has gradually been replaced with an understanding of feedback as an interactive process in which students have a central role as agents of their own learning and understanding (e.g., Black & Wiliam, 2009; Boud, 2000; Boud & Molloy, 2013; Sadler, 1998). In line with this shift, the feedback research literature has increasingly emphasised the importance of active student involvement in feedback activities, both of formative and summative character. That is, both activities concerned with evaluating ongoing work, and activities concerned with making final judgements of completed work.

In the present thesis, the focus is put exclusively on feedback of formative character and the following text will therefore only be concerned with this type of feedback. Before proceeding to briefly overview what the research literature has to say about student involvement in formative feedback activities, an explanation of two concepts that are sometimes used synonymously in this literature is in order: formative assessment and feedback. As maintained in a seminal study by Black and Wiliam (1998), the distinction between these two concepts is not entirely clear, and their use overlaps. However, the description of formative assessment as "encompassing all those activities undertaken by teachers, and/or by their students, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged" (Black & Wiliam, 1998, pp. 7-8) suggests that feedback could be regarded as a component of formative assessment, an approach that is shared by other influential researchers within the feedback research field (e.g., Nicol & MacFarlane-Dick, 2006; Sadler, 1989). As Sadler (1989) states, assessment "denotes any appraisal

(or judgement, or evaluation) of a student's work or performance" (p. 120), while feedback is a key element of formative assessment that can be defined "in terms of information about how successfully something has been or is being done" (p. 120). Therefore, in the summary of the literature presented below, the term formative assessment also comprises feedback.

In the research literature on formative assessment, active student involvement in such activities is largely portrayed as central to effective learning (e.g., Andrade & Valtcheva, 2009; Black & Wiliam, 1998; 2009; Boud, 1995; Nicol & MacFarlane-Dick, 2006). For example, Andrade and Valtcheva (2009) maintain that self-assessment is a key element of formative assessment that boosts learning and performance by involving students in thinking about the quality of their own work rather than relying solely on teacher judgements. In this way, self-assessment is considered to promote students' capacity to monitor and manage their own learning. Similarly, peer-assessment is claimed to enhance subject matter understanding, enable students to take active control in the management of their own learning, and help them develop objectivity in relation to standards (e.g., Liu & Carless, 2006; Nicol & MacFarlane-Dick, 2006; Topping, 2009). In the words of Nicol and MacFarlane-Dick (2006): "peer processes help develop the skills needed to make objective judgements against standards, skills which are transferred when students turn to producing and regulating their own work" (p. 208). As this quote implies, it is assumed that there is a salient link between peer- and self-assessment, and the skills developed through engagement in the former process are thought to benefit the latter. Moreover, Liu and Carless (2006) maintain that "[s]elf-assessment can be enhanced by peer contributions which may take the form of questions, comments or challenges which prompt one to reflect on what has been done" (p. 281).

In parallel with arguments that highlight the benefits of self- and peer-assessment, it is emphasised that these are complex tasks that require training and appropriate guidance to achieve success (e.g., Dochy et al., 1999; Nicol & MacFarlane-Dick, 2006; Sluijsmans & Prins, 2006; Taras, 2003; 2008; Topping, 2009). Teachers therefore have a central role in facilitating and guiding students' accomplishment of self- and peer-assessment, for example by explaining goals and assessment criteria, and providing "feedback on the feedback" (e.g., Carless & Boud, 2018; Evans, 2013; Taras, 2003). Furthermore, as maintained by Nicol and Macfarlane-Dick (2006), supplementary feedback from teachers helps identify errors that students have missed, and constitutes an important reference frame against which self- and peer-feedback can be contrasted: "[f]eedback

from teachers is a source against which students can evaluate progress, and check out their internal constructions of goals, criteria and standards" (p. 208).

While there seems to be consensus that instructional guidance is a prerequisite for successful accomplishment of self- and peer-assessment, few studies provide detailed insight into how such activities can be facilitated and guided by teachers/instructors, how they are approached and accomplished by students, and what difficulties students encounter in doing so. Adopting a naturalistic and interactionally-oriented approach, the present thesis sets out to investigate such issues. The investigation takes place in the context of simulation-based interprofessional team training for healthcare students, an educational context in which active involvement by learners in reflecting upon, assessing and providing feedback on their own performance is considered crucial to support learning of the practiced skills and competencies (e.g., Fanning & Gaba, 2007; Gardner, 2013a; Motola et al., 2013). Using video recorded data of naturally occurring educational situations as its empirical basis, and drawing on ethnomethodology and conversation analysis (Garfinkel, 1967; Sacks, 1992), the thesis seeks to show, in interactional detail, how the feedback activities under study are constituted in situ by the students and teachers of the setting (Hester & Francis, 2000a). In the words of Lindwall, Lymer and Greiffenhagen (2015) such an approach requires for the researcher to refrain "from passing judgement on whether what is captured is 'good' or 'bad', 'desirable' or 'undesirable', a 'success' or a 'failure'" (p. 143) and to avoid "imposing external standards and instead [investigate] the internal standards operating in the setting" (Lindwall et al., 2015, p. 143). Internal standards refer to the practices, procedures, reasoning and local knowledge that the practitioners of the setting themselves attend to and make use of in undertaking the activities they are engaged in (Luff, Hindmarsh & Heath, 2000). Although a study taking such an approach does not result in hands on guidelines for how to improve the investigated activities, or generates general models or principles of "good feedback practice" (cf. Nicol & MacFarlane-Dick, 2006), the results still have practical utility to educational practitioners. As demonstrated by prior research, rich and empirically grounded observations and findings concerning both generic and local features of the educational activities under study can help inform evaluation and redesign of the studied activities, as well as the design of new educational activities (Hester & Frances, 2000a; Luff et al., 2000).

Training of interprofessional collaboration and teamwork in simulation-based environments

The thesis includes three empirical studies that each investigates feedback activities undertaken in simulation-based team training[1]. This training was a mandatory element of the medical and nursing program at two Swedish universities. Arranged as one-day training occasions for mixed groups of medical and nursing students, it was intended to provide the students with opportunities to practice interprofessional teamwork and collaboration. As conceptualised in the healthcare research literature, interprofessional collaboration refers to practitioners of two or more professions (e.g., physicians and nurses) working together in a team, contributing their profession-specific strengths and skills to achieve a synergy effect that optimises the quality of patient care (e.g., Reeves et al., 2013). To achieve such collaboration, the members of a team not only have to master the competencies related to their own profession, but also have an in-depth understanding of the skills, competencies, and responsibilities of other professions (Boet et al., 2014; Zhang, Thompson & Miller, 2011). Moreover, as teams are often formed ad hoc in emergency situations, healthcare practitioners need to be prepared to coordinate their thoughts and actions with individuals they have not worked with before (Eppich et al., 2011; Østergaard, Dieckmann & Lippert, 2011), something that places high demands on adaptability.

In recent years, actors within the healthcare domain worldwide have increasingly emphasised the need for training of interprofessional teamwork competencies to address the alarming number of communication and collaboration errors between healthcare practitioners of different professions (e.g., Gilbert & Hoffman, 2010). In response, a growing number of university hospitals, both in Sweden and other countries around the world, have started to offer interprofessional team training for healthcare students and professionals (Gough et al., 2012; Palaganas, Epps & Raemer, 2014). For students, such training typically not only involves the practice of interprofessional competencies, but also of a variety of other teamworking skills of medical, social and interpersonal character that are vital to their future work practice. In the simulation training investigated in this thesis, the emphasis is placed on training of social and

[1] The third study of the thesis is an exception. This study, which is a cross-national collaboration, examines feedback in two different educational settings in order to draw conclusions of a more general nature. More information about this study is provided later in this chapter.

interpersonal skills, often referred to as *non-technical skills*. These include, for instance, communication, cooperation, decision making, conflict resolution, and workload management (Østergaard et al., 2011). Practice of such skills are often performed with the support of the *Crisis Resource Management (CRM) system*: a set of fifteen principles aimed to provide guidance on how to handle and perform key aspects of individual and team behaviour in both ordinary and crisis situations (Fanning et al., 2013; Østergaard et al., 2011).

Today, training of teamwork skills is increasingly carried out in simulation-based environments (Eppich et al., 2011). In addition to being a more accessible and time-efficient alternative than training with real patients, training with simulators can help circumvent a number of safety and ethical issues that may arise in "real" situations. As pointed out by Issenberg and Scalese (2008):

> simulators can be readily available at any time and can reproduce a wide variety of clinical conditions and situations on demand. Unlike real patients, simulators are never 'off the ward' to undergo diagnostic tests or treatment at the time when trainees arrive at the bedside to learn. Simulators do not become tired or embarrassed or behave unpredictably, and therefore they provide a unique experience for all (p. 32).

Within the healthcare sector, there is a variety of simulators (e.g., screen-based applications, anatomic models, and virtual reality simulators) designed to enable different types of training. For training of teamwork and collaboration, so-called *patient simulators* are typically used. Modern patient simulators are advanced computer-controlled devices that enable simulation of a variety of bodily functions such as heart-, lung- and bowel-sounds, bleeding, sweating, speech, and the like. Simulation exercises based on such patient simulators that are undertaken in settings designed to resemble authentic clinical environments are called *full scale simulations* (Østergaard et al., 2011; Østergaard, Østergaard & Lippert, 2008). Full scale simulations generally include three steps: briefing, scenario, and debriefing. In the first step, the briefing, the training participants receive a brief presentation of the environment and the upcoming case. Thereafter, they perform the scenario, that is, the simulated case. The last step, the debriefing, involves a follow-up conversation in which the participants discuss and reflect on their simulation performance under the guidance of the instructor (Østergaard et al., 2008). The occurrence of such conversations is based on the assumption that the combination of learners actively performing certain actions and tasks, and then analysing, reflecting upon, and receiving feedback on the performance of those actions and tasks, leads to valuable insights and long-

lasting learning (e.g., Fanning & Gaba, 2007; Lederman, 1992). It is in this final step of the simulation training that the feedback activities investigated in the present thesis take place.

Both practitioners and researchers within the healthcare simulation training field emphasise the importance of learners taking an active role in the debriefings. In line with the arguments presented in the educational literature on formative assessment (see the previous section), it is claimed that learners' active engagement in critical analyses and assessment of their own performance is central to enhance learning and achievement (e.g., Dreifuerst, 2009; Fanning & Gaba, 2007; Østergaard et al., 2011). The role of the instructor in the debriefing is typically described as that of a "conversational guide" or "facilitator" rather than a traditional classroom teacher or instructor. With support of pedagogical models for debriefing, facilitators are supposed to elicit and guide learners' reflection, critical analyses and assessment of their own simulation performance rather than engaging in didactic teaching and directive feedback (e.g., Fanning & Gaba, 2007; Steinwachs, 1992; Østergaard et al., 2011).

A more detailed presentation of how post-scenario debriefings are described in the healthcare simulation research literature, and what assumptions and theories underlie the design of such conversations is provided in Chapter 2.

Empirical studies, aim, and research questions

During the years of 2013 to 2016, this doctoral research was part of a larger research project entitled *Interprofessional learning in simulation-based training for the healthcare professions* (Swedish title: *Interprofessionellt lärande i simuleringsbaserad utbildning för hälso- och sjukvårdens professioner*) that was funded by the Swedish Research Council. The overarching purpose of this project was to contribute knowledge on how simulation-based learning environments could support the education and training of interprofessional collaboration and teamwork skills for healthcare students and professionals. Research teams from three Swedish universities – Linköping University, Karolinska Institute, and the University of Gothenburg – collaborated on the project. While the larger research project was in progress, the doctoral research was undertaken in close cooperation with the three research teams, and in particular with the University of Gothenburg team.

Empirical material, mainly in the form of video recordings of simulation-based team-training occasions for healthcare students and professionals, was collected at all three research sites. Some of this material has been used as data

for the thesis (the data is further described in Chapter 5 and 6). Fragment (1) presented below provides a brief example from the data, an episode taken from a video recorded debriefing conversation undertaken at the Gothenburg research site. Under the guidance of a facilitator (FAC), a group of seven nursing students (NU1-NU7) and a medical student (MED) jointly discuss their teamwork and collaboration in the preceding simulation training scenario. At the Gothenburg site, the debriefings were organised according to a pedagogical model aimed to support reflection and learning. The model was designed to divide the conversation into three phases (description, analysis and application), with each phase including scripted questions intended to generate certain kinds of contributions from the learners. The episode shown in Fragment (1) begins with the facilitator addressing one of these questions, "what worked well?", aimed at inviting the students to provide positive feedback on their own simulation performance. This question is followed by self- and peer-directed feedback from the students, and instructional uptake of this feedback by the facilitator: all of which are phenomena of interest to the thesis. The episode is used here to briefly introduce these phenomena, while more detailed analyses are provided in the empirical studies.

Fragment (1) (simplified transcript, translated from Swedish to English[2])

```
[SIM121017-debrief5A 00:09:04 - 00:10:21]

01   FAC:   okay what do you think worked well here
02          (5)
03   NU6:   it was (PRT) a pretty good collaboration
04   XXX:   m
05   FAC:   pretty good=
06   NU6:   =yeah=
07   FAC:   =what was it- what was good about that
08   NU5:   it feels like we kept track of what- who did what an'
09          how we did it an' so
10   NU6:   (xxx)
11   NU3:   (xxx) no but we coordinated I think
12   FAC:   yeah
13   NU6:   if it- yeah if it was something yeah I connect that
14          okay you do that
15   NU5:   m
16   NU6:   yeah I do that okay
17   NU5:   m (.) an' so we just waited for orders then ((laughs))
18   FAC:   m
19   NU5:   (xxx)
20   FAC:   okay (.) uhm other things that uh (.) worked well
21          (7)
```

[2] The transcripts presented in the empirical studies include a higher level of detail and contain lines for original language. Transcript conventions can be found in Chapter 6.

```
22   FAC:   what did you do that was good Sally?
23          (3)
24   NU3:   uh (2) I alarmed
25   FAC:   m
26          (2)
27   NU3:   I don't know
28   FAC:   you don't know (.) can't anyone help Sally
29   NU3:   what?
30   NU7:   [you were (PRT) inserting a needle ]
31   FAC:   [is there anyone who can help Sally]
32   NU2:   yeah but you reacted ver- super fast to that she lost
33          consciousness too an' ma- made you aware of that
34          immediately
     NU2:                                  ((points at MED))
```

In both the research- and best-practice literature, it has been argued that so-called open-ended questions are an effective means to provoke learner self-reflection and self-assessment (e.g., Carless et al., 2011; Sawyer et al., 2016). This assumption can be seen to be reflected in the design of the scripted question addressed by the facilitator on line 01: except for specifying that the answer should focus on what worked well the question leaves it open to the students to choose what issues to comment on. Moreover, by not specifying an addressee, the question invites for self-selection among the students.

To date, few studies have provided detailed insight into how students respond to open-ended elicitations of this kind. In Fragment (1), the question receives a response that is in line with the question terms: on line 03, one of the nursing students who took part in the preceding scenario mentions an aspect of the simulation performance that worked well, namely the collaboration ("it was a pretty good collaboration"). What can also be seen is that this answer is not treated as sufficient by the facilitator, who asks a follow-up question that invites for further elaboration of the response (line 05, 07). The follow-up question occasions some additional and more detailed comments on the collaboration from the students (line 08-19), but additional follow-up questions from the facilitator are then required to keep the discussion active (line 20, 22, 28, 31). One of these questions is directed to a particular student, inviting her to tell what she did well (line 22). This student's way of responding constitutes an illustrative example of the interactional difficulties that such elicitations often occasion: rather than commenting on her own simulation performance in positive terms, the student responds with hesitation and hedging which suggests that positive self-talk is seen as a difficult matter (line 24, 27). In response to the student's claim of not knowing what she did well (line 27), the facilitator invites the other students in the group to help her (line 28), that is, to praise the

performance of a student peer: a practice that is treated here and elsewhere as interactionally unproblematic (line 32-34).

As pointed out above, the episode in Fragment (1) is used in this chapter to briefly introduce some of the phenomena that are subject to in-depth analyses in the three empirical studies of the thesis: for example, instructional questions (Study 1 and Study 3), instructional uptake (Study 2), student self-assessment (Study 1 and Study 3), and student peer-feedback (Study 1 and Study 2). A common aim of these studies is to shed further light on what formative feedback activities in which students are actively involved, and instructional guidance of such activities, look like in terms of actual practice. The first study, a published article that is co-authored with Oskar Lindwall and Hans Rystedt, both affiliated with the University of Gothenburg, builds on recordings of debriefing conversations conducted at the Gothenburg site. The study examines how video recordings are used as an instructional means to elicit student self-reflection and feedback on their own simulation performance. The second study, a single-authored manuscript based on recordings of debriefing conversations conducted at the Linköping site, focuses on how the facilitators guide the students' feedback on the performance of peers through instructional uptake of this feedback. The third study of the thesis, a published article that is co-authored with Karianne Skovholt, University of South-Eastern Norway, and Elizabeth Stokoe, Loughborough University, examines episodes in which students are invited to assess their own performance through open-ended teacher/facilitator questions. Based on two data-sets, the first consisting of debriefing conversations conducted at the Gothenburg site, and the second of feedback encounters for students at a Norwegian upper secondary school, the third study has a design that reflects the thesis' general and non-setting specific interest in the organisation of feedback and instructional guidance. Investigating the same activity in two different educational settings enables for comparisons and contrasts, which in turn makes it possible to draw conclusions on whether the activity takes setting-specific forms or looks similar across different settings.

Based on how student involvement in formative feedback activities is described in the research literature, and the way in which such activities are designed and accomplished in the setting under study, three themes have emerged as particularly relevant to explore: 1) the instructional guidance by the facilitators, 2) the organisation of the students' feedback contributions; and, 3) the practical application of models and principles of "good practice". The third theme concerns how normative models and principles described in the

research- and best-practice literature feature in real-time feedback practices, for example, models/principles for teamwork and communication (e.g., the principles of CRM mentioned in the previous section), and models/templates for debriefing (e.g., the model used by the facilitator in Fragment 1). More specifically, the thesis addresses the following research questions:

1. How do the facilitators work to elicit and guide student reflection and feedback?
2. How are the students' feedback contributions interactionally and sequentially organised?
3. How are models and principles of "good practice" invoked, topicalized, and acted upon in the feedback practices?

Outline of the thesis

The thesis is divided into two parts. Part one provides a frame for the reading of the empirical studies presented in part two. In addition to this introduction, part one includes a background (Chapter 2) that presents the debriefing element of simulation-based team training in more detail in view of how it is described in the healthcare simulation research literature. Furthermore, the chapter outlines how the notion of feedback is approached in this literature and discusses some parallels with the educational research literature on formative assessment. In Chapter 3, the theoretical framework of the thesis is introduced. Chapter 4 provides an overview of previous interactionally oriented research on feedback and instructional guidance that provides a relevant background for the thesis. Chapter 5 presents the research setting and data production, and Chapter 6 describes the procedures for post-processing and analysis of the data. In Chapter 7, the three empirical studies are summarised, and in Chapter 8 the results of the thesis are discussed. Chapter 9 provides a Swedish summary of the first part of the thesis. The second part of the thesis contains the following three studies:

STUDY 1 – Johansson[3], E., Lindwall, O., & Rystedt, H. (2017). Experiences, appearances, and interprofessional training: The instructional use of video in post-simulation debriefings. *International Journal of Computer-Supported Collaborative Learning, 12*(1), 91-112.

[3] Current name: Nordenström

STUDY 2 – Nordenström, E. (unpublished manuscript). Local corrections and general advice: Instructor uptake of student peer-feedback in healthcare simulation debriefings.

STUDY 3 – Skovholt, K., Nordenström, E., & Stokoe, E. (2019). Evaluative conduct in teacher-student supervision: When students assess their own performance. *Linguistics and Education*, *50*, 46-55.

2. Background: debriefing and feedback in simulation-based healthcare training

As identified in the introduction, the thesis' interest in issues related to feedback and instructional guidance are primarily explored in the context of healthcare simulation debriefings. This chapter summarises how the debriefing process is described in the healthcare simulation research literature with the aim of introducing and explaining concepts, theories, and methods for debriefing that are addressed in the empirical studies of the thesis. The chapter does not intend to provide an extensive review of this literature, but focuses on certain parts that are of particular relevance to the thesis. The first section outlines how the two concepts of debriefing and feedback are used and related to one another, while the second section explores what theories and assumptions underlie the design of debriefing conversations, and presents a selection of methods and pedagogical models for debriefing. Special emphasis is placed on how these models are used to provoke learner self-reflection and feedback. In the final section, the contribution of the thesis in relation to the research summarised in the first chapter is discussed.

Debriefing as feedback or feedback in debriefing?

In a recent review of the research literature on healthcare simulation debriefings, Sawyer et al. (2016) point out that the concepts of debriefing and feedback are sometimes used synonymously. For example, some publications describe the debriefing as a "special kind of feedback process" (Fanning & Gaba, 2007, p. 121; see also, e.g., Chiniara et al., 2013; Issenberg et al., 2005; McGaghie et al., 2010; Motola et al., 2013), which implies that debriefing and feedback are almost equivalent activities. Others, however, are careful to emphasise the distinction between debriefing and feedback, arguing that debriefing refers to the post-scenario discussion as a whole, while feedback is a specific component of this discussion. In the words of Eppich et al. (2015), debriefing "is an interactive discussion or conversation to reflect on performance" (Eppich et al., 2015, p.

1501), whereas feedback is "[s]pecific information about the comparison between a trainee's observed performance and a standard, given with the intent to improve the trainee's performance" (Eppich et al., 2015, p. 1501; see also e.g., Cheng et al., 2014; Sawyer et al., 2016). The conceptualisation of feedback provided by Eppich et al. (2015) derives from an extensive review of literature on feedback undertaken by van de Ridder et al. (2008) with the purpose to propose "a consensual definition" of feedback in clinical education. As found by van de Ridder et al. (2015), medical education literature on feedback largely defines feedback as *information*, which means that it has "message content as its focus" (p. 191), and *reaction*, the latter to which interaction, "a process of information delivery and reception" (p. 191), is central. Judging by the definitions of feedback provided in reviews of the healthcare simulation research literature, the conceptualisation of feedback as information is the most widespread in this field (see, e.g., Chiniara et al., 2013; Sawyer et al., 2016; Waznonis, 2014). According to Chiniara et al. (2013), feedback is: "a particular type of communication in which a sender (the source) conveys a message to a recipient that includes information about the recipient's behavior" (p. e1384). Likewise, Sawyer et al. (2016) define feedback as "one-way communication of information to participants, given with the intent of improving future performance" (p. 215).

A few decades ago, the conceptualisation of feedback as information was also prevalent in the educational field (Boud & Molloy, 2013). The notion of feedback was originally used to describe information fed back into electrical or mechanical systems to reduce the gap between an actual output signal and a reference level (Black & Wiliam, 1998; Boud & Molloy, 2013). When adopted within the educational field, the term feedback according to Boud and Molloy (2013) was initially used in a "pre-industrial sense" as its meaning was "synonymous with 'telling', that is the one-way transmission of information from teacher to student" (p. 701). However, in recent years, this "directive telling approach" (Evans, 2013, p.71) to feedback has been increasingly replaced with a socio-constructivist view of feedback as: "facilitative in that it involves provision of comments and suggestions to enable students to make their own revisions and, through dialogue, helps students to gain new understandings without dictating what those understandings will be" (Evans, 2013, p. 71). In the wake of this shift, the feedback research literature has increasingly emphasised the importance of active student involvement in feedback activities (see, Chapter 1), something that is reflected in the research literature on post-scenario

debriefings although a shift in the conception of feedback has been slower to emerge.

The post-scenario debriefing process

In the majority of the healthcare simulation research literature, simulation training is described as a form of experiential learning (e.g., Chiniara, 2013; Fanning & Gaba, 2007; Gardner, 2013a; Lederman, 1992). The experiential learning process is usually described by means of a cycle/spiral that contains four stages: 1) concrete experience, 2) reflective observation, 3) abstract conceptualisation, and 4) active experimentation (Fanning & Gaba, 2007; Kolb, 1984). As maintained in an influential review study of literature on healthcare simulation debriefings (Fanning & Gaba, 2007), simulation training sessions provide an opportunity for learners to go through all four stages of the experiential learning cycle "in a structured manner and often combine the active experiential component of the simulation exercise itself with a subsequent analysis of, and reflection on the experience" (p. 116). The subsequent analysis and reflection on the simulated event mentioned by Fanning and Gaba (2007) takes place during the post-scenario debriefing: the component of the simulation training that "represents facilitated or guided reflection in the cycle of experiential learning" (p. 116). Or, as expressed in more specific terms by Gardner (2013a):

> [d]ebriefing is a discussion and analysis of an experience [... that] provides opportunities for exploring and making sense of what happened during an event or experience, discussing what went well and identifying what could be done to change, improve and do differently or better next time. (p. 166)

According to this definition, the purpose of a debriefing discussion is therefore to improve the learners' future performance rather than to provide them with summative judgements of their prior performance: a process that is usually termed *formative assessment* or *formative feedback* in the research literature (e.g., Black & Wiliam, 2009; McGaghie et al., 2010; Rudolph et al., 2008; Sadler, 1998; see also Chapter 1 in this thesis).

Several methods for debriefing are described in the healthcare simulation research literature, for example, facilitator-guided or learner self-guided post-scenario debriefing, within-scenario debriefing, and video- and multimedia-assisted debriefing (Dufrene & Young, 2014; Sawyer et al., 2016). This chapter, however, concentrates exclusively on facilitator-guided post-scenario debriefing, that is, follow-up discussions led by facilitators and taking place after

simulation scenarios, which is the debriefing method applied in the training settings under study. According to the literature, the main responsibility of a facilitator leading a post-scenario debriefing is to guide and ease the discussion for the learners (Fanning & Gaba, 2007; Lederman, 1992; Østergaard et al., 2011). This guiding should not be done in a didactic manner: the task of the facilitator is not to teach, lecture or expound, but to facilitate learning by asking questions that encourage the learners to reflect upon, analyse and assess their own performance (e.g., Fanning & Gaba, 2007; Lederman, 1992; Steinwachs, 1992; Østergaard et al, 2011). In an early review of literature on debriefing, Lederman (1992) points out that questions by the facilitator is a central feature of the debriefing process that serve to stimulate reflection on the simulation experience:

> debriefing is conducted as a guided discussion. Participants are taught to reflect on their experiences and learn from them. They are asked questions about those experiences. Learning is accomplished by responding to questions posed by the debriefer and using their experiences and analyses of those experiences as the basis for their answers. (p. 149)

To support facilitators in organising post-scenario debriefings in the way described above, a number of pedagogical models and structures have been developed (see, e.g., Dreifuerst, 2012; 2015; Eppich & Cheng, 2015; Jaye, Thomas & Reedy, 2015; Kolbe et al., 2013; Phrampus & O'Donnell, 2013; Sawyer & Deering, 2013; Steinwachs, 1992; Zigmont, Kappus & Sudikoff, 2011). The next sub-section briefly overviews the design and rationale underlying some of these models.

Pre-planned models and structures for debriefing

As noted by Sawyer et al. (2016), structured models for debriefing typically divide the conversation into a number of phases, each with a specific focus and purpose. The number of phases varies, some models comprise three phases and others up to seven. However, the majority of the models described in the literature include two common phases: an *analysis/discussion* phase dedicated to reflection and critical analysis of the learners' actions in the preceding simulation scenario, and a *summary/application* phase aimed at summarising the insights from the scenario and formulating the lessons to be learned (Sawyer et al., 2016). These two phases derive from a debriefing structure that was originally introduced in a best-practice paper by Steinwachs (1992), and has since then been widely adopted in healthcare simulation training contexts. As described in

Steinwachs' paper (1992), a debriefing should be structured around the three phases of *description*, *analogy/analysis*, and *application*, that serve the following purposes:

> In the description phase, participants gradually emerge from the game world – impelled to describe what happened to them. They need this chance to air their experiences and impressions, but also need to listen to the other participants and so be filled in on the whole picture. In the analogy/analysis phase, participants systematically examine the simulation game model as just played and as designed, identifying and exploring parallels with real-world situations. In the application phase, participants focus on the reality represented by the simulation game. They consider what understandings are particularly relevant to them and perhaps what courses of action they wish to carry out as a result of these understandings. (p. 187)

Hence, according to Steinwachs, a debriefing should begin with a description phase during which the participants jointly describe what they have been through in the simulation. This should be followed by an analogy/analysis phase, during which the participants systematically analyse the simulation experience and explore parallels with real-world situations. In the concluding application phase, the participants formulate "take-home messages", that is, lessons learned from the simulation scenario.

The three phases of Steinwachs' debriefing structure have been used as basis for a number of more contemporary debriefing models, including one described by Jaye et al. (2015) that is specifically designed to promote discussion of the non-technical skills practiced in the preceding simulation scenario (see Chapter 1 for an explanation of non-technical skills). As argued by Jaye et al. (2015) "debriefing facilitators need both specific techniques and a clear structure to optimise learning during a debrief" (p. 175): a need that the so-called "diamond model" is aimed to address. For each of the three aforementioned phases, the diamond model lists a series of specific questions for the facilitator to ask the learners (e.g., "so what happened?", "how did you feel?"), as well as suggestions on how to formulate transitions between the phases (e.g., "this scenario was designed to show..."). In the first phase, the *description*, the facilitator should invite the learners to formulate an agreed factual description of the preceding simulation scenario. The next phase, the *analysis*, should involve a discussion of non-technical skills elicited through open-ended questions by the facilitator. As stressed by Jaye et al. (2015), the focus should be directed to one skill in each debriefing conversation in order to avoid cognitive overload for the learners. This should be a skill that the learners themselves identify as

relevant to discuss as they respond to the facilitator's initial open-ended questions. The task of the facilitator is to "illustrate positive [...] examples of the non-technical skill that is to be in focus [... and] help to break this skill or behaviour down into specific actions that the participants can use in their clinical environments" (Jaye et al., 2015, p. 174). As further stressed by Jaye et al. (2015), this step of the analysis is a facilitative process during which the facilitator "reflects and summarises the suggestions of the group, reframing them in non-technical language" (p. 174). The last phase, the *application*, aims at encouraging the learners to summarise what they have learned from the scenario and how they may apply this knowledge in future clinical practice.

Another and to some extent similar three-phase debriefing model is presented by Zigmont et al. (2011). The so-called "3D-model" contains the three phases of *defusing*, *discovering* and *deepening*. In the first phase, the defusing, the facilitator "should prompt discussion surrounding the emotional impact of the experience on the learners and the description of the event and how it unfolded" (Zigmont et al., 2011, p. 54). As an initial step, the facilitator should encourage the learners to share their feelings in order to reduce anxiety and stress and in this way "clear the slate for learning" (Zigmont et al., 2011, p. 56). Next, learners should be invited to factually describe what happened in the scenario in order for everyone to achieve a shared understanding of the course of events. The description of what happened can also serve to reveal gaps in the learners' knowledge regarding clinical management, which should then be addressed through expert input from the facilitator. The main purpose of the discussion about emotions and facts, however, should be to set the tone for the analysis to occur during the upcoming discovering phase, which is equivalent with the analogy/analysis phase in the structure presented by Steinwachs (1992). During the discovering phase, the facilitator should elicit and guide learner self-reflection and self-assessment, helping the learners to identify strengths and opportunities for improvement, as well as the mental models and decision-making processes that led to their actions in the scenario. As support to promote reflective observations, the facilitator can use a video recording of the simulation scenario that serves to provide an "objective, 'third party' view" (Zigmont et al., 2011, p. 56) of the learners' performance. The final phase, the deepening, should serve as an explicit connection between what has been learned in the scenario and actual practice. As a conclusion to the final phase, the facilitator should provide the learners with a summary of the lessons learned.

Eppich and Cheng (2015) present a debriefing structure that is similar to the two models overviewed above, however, it contains four phases (*reaction*, *description*, *analysis,* and *summary*). Key principles of this model, which is called "PEARLS", are that learning should be active, collaborative, self-directed, and learner-centred (Eppich & Cheng, 2015). Like the model presented by Zigmont et al. (2011), the first phase of the PEARLS model (reaction) should be initiated with an open-ended question that invites for venting of the learners' thoughts and feelings ("How are you feeling?"). In the subsequent description phase, the learners should be asked to briefly summarise key events of the simulation scenario in order to make sure that the facilitator and the learners are "on the same page" (Eppich & Cheng, 2015, p. 108). The third phase, the analysis, should be adapted to the level of insight and experience of the learners and the facilitator, the amount of time available for the debriefing discussion, the learning objectives, and the kind of performance being trained (e.g., interprofessional collaboration, leadership et cetera). As maintained by Eppich and Cheng (2015) learner self-assessment is an effective and learner-centred method to identify what issues of the simulation performance the learners find most relevant to discuss. When such issues have been identified, the facilitator should work to promote in-depth discussion by asking follow-up questions and "strive to close performance gaps through directive feedback and teaching as appropriate" (p. 108). The final phase, the summary, should be dedicated to the formulation of take-home messages, that is, lessons learned from the simulation scenario (Eppich & Cheng, 2015).

While it appears to be common practice to organise healthcare simulation debriefings around structured pedagogical models of the kind presented above, the application of unstructured "laissez-faire approaches" are also reported in the research literature (e.g., Brackenreg, 2004; Dreifuerst, 2009; Neill & Wotton, 2011; Nyström et al., 2016). Such approaches typically imply that the debriefing is carried out without a pre-planned guiding structure or clearly expressed aims, with the facilitator taking a passive role and leaving the learners to decide the focus and direction of the debriefing. According to Neill and Wotton (2011), a debriefing organised in this way could be described as "a discussion rather than a delineated and purposeful reflection on students' actions" (p. e163).

Fostering learner self-assessment: a key element of the debriefing

As can be seen from the previous overview of pedagogical models for debriefing, these, like the majority of other models described in the literature, have in common that they break up the debriefing conversation into a number of similar phases aimed at generating certain kinds of contributions from the learners, of which the analysis/discussion phase is the core (Fanning & Gaba, 2007). As an initial step in this phase, the models typically prescribe learner self-assessment of what went well and what could be changed in order to identify what issues should be subject to in-depth analyses and discussion. Consequently, similar to how self-assessment is considered a key element of formative assessment (e.g., Andrade & Valtcheva, 2009), it is also described as a central feature of the debriefing process that serves to promote reflection and encourage students to take responsibility for their own learning (e.g., Cheng et al., 2016; Eppich & Cheng, 2015). For instance, as argued by Cheng et al. (2016), "[e]ngaging students in a self-assessment of their learning helps promote independent self-directed learners who embrace the responsibility for their own learning" (p. 39).

To foster learner self-assessment, many models and methods for debriefing advocate the use of open-ended questions by the facilitator, for example, "what went well?" and "what could be changed"? (Sawyer et al., 2016, p. 214; see also, e.g., Cheng et al. 2016; Eppich & Cheng, 2015; Jaye et al., 2015; Kolbe et al., 2013; Sawyer & Deering, 2013; Waxman, 2010). As maintained by Cheng et al. (2016), such questions "empower learners to reflect on and assess their performance, share their personal agenda, and help them to address their own learning needs" (p. 38). The issues that the learners identify in response to the facilitator's open-ended questions should preferably be used as starting points for further inquiry (Eppich & Cheng, 2015; Sawyer et al., 2016). To promote in-depth discussion and analysis of these issues, facilitators are recommended to use other questioning techniques, such as socratic questioning[4] and advocacy-inquiry (see, e.g., Eppich et al., 2015; Jaye et al., 2015; Kolbe et al., 2013; Rudolph et al., 2006). In the words of Eppich and Cheng (2015), the advocacy-inquiry technique can help facilitators "to uncover learners' rationale for action or mental models by stating a concrete observation and sharing their point of view or

[4] Dreifuerst (2015) defines socratic questioning as "an approach to teaching and learning in which the teacher does not give information or answer students' questions directly but instead turns the task of uncovering the answer to the student by asking a series of questions so that students come either to the answer or to a deeper awareness of the limitations of their knowledge" (p. 268) .

judgement about it *before* inquiring about the learners' perspective" (p. 107, emphasis in original). As further outlined by Rudolph et al. (2006), who were pioneering in using the advocacy-inquiry technique in healthcare simulation debriefings, a central idea of reflective practice, which is core to debriefing, is that learners do not just passively perceive an "objective reality". Instead, learners make sense of their impressions and experiences through internal cognitive frames, that is, "internal images of external reality" or "mental models" (Rudolph et al., 2006, p. 50). These frames or mental models of the learners are considered to shape the actions they take (and thus the result of a simulation or a real clinical case), and for this reason it is utterly important that the frames are "correct" (Rudolph et al., 2006). A purpose of the facilitator inviting for in-depth reflection and analyses of certain issues is thus to help learners bring their internal frames "to the surface, analyze their impact on actions, and craft new frames [...] and actions" (Rudolph et al., 2006, p. 50).

The literature on debriefing overviewed above prescribes facilitation techniques that involve the facilitator encouraging and supporting the learners in reflecting upon, analysing, and commenting on their own performance through the use of different questioning techniques (e.g., open-ended questions and advocacy-inquiry). Although some studies stress the importance of expert feedback from the facilitator (e.g., Issenberg et al., 2005; McGaghie et al., 2010), the literature on debriefing methods largely recommends that facilitators avoid engaging in didactic teaching and directive feedback. It is acknowledged, however, that the facilitation technique must be adapted to factors such as the complexity of the preceding simulation scenario, the experience and expertise of the learners, and the time available for the debriefing (e.g., Eppich & Cheng, 2015; Fanning & Gaba, 2007; Østergaard et al., 2011). For example, in debriefing for novice learners, expert feedback from the facilitator is considered necessary to address knowledge and performance gaps revealed through the learners' self-assessments (e.g., Eppich & Cheng, 2015; Fanning & Gaba, 2007; Rudolph et al., 2008; Sawyer et al., 2016). However, as stressed by Cheng et al. (2016), to maintain learner engagement facilitators providing directive feedback should be careful to address issues on the learner agenda rather than bringing up issues they themselves find important.

Concluding remarks

As outlined in this chapter, the healthcare simulation research literature on debriefings is rich in models and principles for how student self-reflection and feedback on their own performance can be fostered. Common to many of these models and principles is that they build on theoretical and/or best-practice accounts rather than empirical findings, and that they provide general guidelines for how educational activities should be organised in practice. The models for debriefing summarised in the previous section, for example, provide facilitators with an overall structure and agenda for debriefing conversations, as well as clear directives on how to initiate discussions on certain issues (e.g., "ask x", "say y"). However, detailed instructions for how to follow up on learner responses to these elicitations, or how to adjust the elicitations in response to learner contributions that are not in the intended format, are scarce. The underlying rationale of the models therefore seems to be that certain questions/prompts (e.g., "how are you feeling") generate certain types of answers (e.g., venting of emotions), which in turn constitute direct representations of the learners' feelings, thoughts and "mental models"/ "internal frames".

That said, the point is not that these models are without merit. First and foremost, practitioners within the simulation training field who apply the models on a regular basis report on their favourable effects (see, e.g., Jaye et al., 2015) which, despite the lack of scientific basis, carry weight as "evidence" for their practical utility. Second, a number of scientific studies within the simulation research field have tested the effectiveness of various methods and models for debriefing through, for example, randomised controlled trials and/or questionnaires and demonstrated positive results in terms of estimated efficiency, satisfaction, and learner achievement (e.g., Chronister & Brown, 2012; Dreifuerst, 2012; Kolbe et al., 2013; Savoldelli et al., 2006; Timmis & Speirs, 2015). Previous research has thus provided evidence of the positive effects that these models can have on learning and achievement. By contrast, empirically grounded observations showing how the various methods and models for debriefing and feedback are acted upon in real-time practice remain scarce, and the details of how they feature in interaction are thereby unknown. This is where the thesis makes its contribution. Using video recordings of naturally occurring educational situations as its empirical basis, the thesis investigates the moment-by-moment interaction that takes place between debriefing facilitators and students as they carry out feedback activities organised on the basis of

normative models and principles. As mentioned in the previous chapter, the aim is to shed further light on what such feedback activities look like in terms of actual practice: how facilitators elicit and guide student self-reflection and feedback, how these practices are approached and accomplished by students, and what difficulties they encounter in doing so. Accordingly, although the thesis examines the same activity as studies in the healthcare simulation research field (i.e. debriefing), its theoretical starting points, methods, and research interests are substantially different. More detailed descriptions of the theoretical and methodological grounds of the thesis are provided in the next chapters.

3. Theoretical approach: ethnomethodology and conversation analysis

The theoretical approach adopted in this thesis is informed by ethnomethodology (EM) and conversation analysis (CA), two closely intertwined but nevertheless distinct perspectives with roots in sociology. The aim of this chapter is to outline the basic premises and objectives of EM and CA, and explain how these two perspectives can be used as frameworks for studying professional conduct and instruction-in-interaction.

Ethnomethodology

Ethnomethodology (EM) was founded by Harold Garfinkel (1917-2011) in the 1950s. The most well-known outline of the perspective is provided in Garfinkel's seminal publication from 1967, *Studies in Ethnomethodology*: a collection of empirical studies framed by an introductory chapter that presents the premises and objectives of ethnomethodology[5]. To use the words of Garfinkel (1967), the studies included in this publication seek to "treat practical activities, practical circumstances, and practical sociological reasoning as topics of empirical study" in order to "learn about them as phenomena in their own right" (p. 1). As implied by the quotation, the studies focus on how mundane everyday activities and social order are produced and maintained by members of society; an approach that stood in sharp contrast with the contemporary theory-driven approaches to social action. In the words of Hester and Francis (2000a):

[5] While *Studies in Ethnomethodology* is known as ethnomethodology's central publication, it has been suggested by Michael Lynch, a former student of Garfinkel and nowadays a leading proponent of ethnomethodology, that it should be regarded as "a series of efforts to come to terms with what ethnomethodology might be about" (Lynch, 1993, p. 141) rather than a coherent outline of the ethnomethodological research tradition. The reason, according to Lynch, is that the studies were written over a relatively long period of time during which Garfinkel worked on developing the ethnomethodological approach. Additional overviews of ethnomethodology can be found in a number of more recent publications (e.g., Heritage, 1984; Livingston, 1987; ten Have, 2004).

> Whereas conventional sociology sees members of society as acting out the demands of forces largely beyond their comprehension and explains social order as originating outside or beyond the sites in which that order is displayed, ethnomethodology 'gives social life back' to members themselves. This is because it is they who, in the course of their activities, produce such order that social life possesses. (p. 3)

As argued in the citation, conventional sociological approaches tend to conceive social life as an arena where "theoretically conceived structures and factors are played out" (Hester & Francis, 2000a, p. 3). To use Garfinkel's terms (1967), members of society are therefore treated as "cultural dopes" who act in compliance with preestablished norms and expectations. Ethnomethodology, in contrast, conceives the orderliness of social life as constituted in situ by the members of society. In "doing social life", members use, act upon, and orient towards shared methods of practical reasoning, referred to as *members' methods* or *ethno-methods*. These methods, that inform "both the *production* of action, and the *recognition* of action" (Heritage, 2009, p. 302, emphasis in original), are central to ethnomethodology. As Garfinkel (1967) writes in the preface to *Studies in Ethnomethodology*: "[e]thnomethodological studies analyze everyday activities as members' methods for making those same activities visibly-rational-and-reportable-for-all-practical-purposes, i.e., 'accountable', as organizations of commonplace everyday activities" (p. vii).

In addition to pointing out members' methods as the primary concern of ethnomethodological studies, the above quotation presents another core notion of ethnomethodology: *accountable* or *accountability*. According to Lynch (1993, p. 14), *accountability*, together with *reflexivity* and *indexicality*, could be regarded as the most frequently mentioned themes in ethnomethodological writings[6]. While these notions, as Lynch (1993) describes it, "implicate one another", and while each of them "indexes an entire swarm of related issues" (p. 14), the ambition of this chapter is limited to briefly introduce each of them separately.

In ordinary talk, accountability is commonly associated with *liability* (ten Have, 2004, p. 19). However, as a notion of the ethnomethodological vocabulary it has a different, although related, meaning. As stated by Garfinkel in the above quotation, accountable[7] is to be understood as "visibly-rational-and-

[6] It should be noted that Lynch made this statement in a publication from 1993, and it thus refers to ethnomethodological studies published before this year.

[7] As pointed out by Bolden and Robinson (2011) there are (at least) two different foci on research on accounts: first, there is the more general sense developed by Garfinkel (1967) and Sacks (1992) that is described above, and second there is the more narrow and traditional sense of an account

reportable-for-all-practical-purposes" (1967, p. vii) or, as he expresses it in the introductory chapter of *Studies in Ethnomethodology*: "observable-and-reportable, i.e. available to members as situated practices of looking-and-telling" (1967, p. 1). An alternative, and somewhat less complex characterisation is provided by ten Have (2004), who argues that accountable in the ethnomethodological meaning is close to "intelligibility or explicability, in the sense that actors are supposed to design their actions in such a way that their sense is clear right away or at least explicable on demand" (p. 19-20). Another characterisation is provided by Hester and Francis (2000a) who explain accountability as the way in which persons "make sense of their environments and the activities of other persons within them, whilst on the other hand, they produce their own actions in such a way that they 'make sense' to others" (p. 3).

An example that serves to further explicate what accountable/accountability means in practice, originally provided by Garfinkel and thereafter picked up in ethnomethodological texts (e.g., ten Have, 2004), is that people who stand in a line at a service point show to others that they are doing so by the way they position their bodies. At the same time, they are able to understand and answer questions from other persons about whether they are standing in the line, where the line starts, where it ends et cetera. This implies that the "understandability and expressibility of an activity as a sensible action is, at the same time, an essential part of that action" (ten Have, 2004, p. 19).

The notion of reflexivity is not only common in ethnomethodological texts, but also elsewhere in qualitative research literature (Lynch, 1993; Macbeth, 2001). It should be noted, however, that there is a considerable difference between the *constitutive reflexivity* that is discussed in the ethnomethodological literature and how reflexivity is treated in other fields (Macbeth, 2001). Typically, reflexivity is used as a methodological concept that refers to "the process of critically reflecting on the self as a researcher" (Lincoln, Lynham & Guba, 2011, p. 115). In contrast, in the ethnomethodological sense reflexivity is intertwined with accountability, and refers to "the self-explicating property of ordinary actions" (ten Have, 2004, p. 20). In other words, reflexivity is treated as a constitutive part of the investigated phenomenon – for instance, how a service line

developed by Scott and Lyman (1968). This conception of an account refers to "the provision of an excuse of justification for a socially undesirable or problematic event. In this sense, 'accounts' are typically distinguished from more neutral 'explanations,' which are 'statements about events where untoward action is not an issue' (Scott & Lyman, 1968, p. 47)" (Bolden & Robinson, 2011, p. 95).

organises itself as a service line – rather than an attitude or a way of doing research. A more detailed characterisation is provided by Macbeth (2001):

> [E]thnomethodology (EM) proposes an entirely different understanding of reflexivity as both a constitutive organization of everyday life and a practical organization that is available for study and description. Rather than a competitor to everyday life, reflexivity in an EM mode recommends the study of social members' ordinary practices for assembling intersubjectively accountable worlds that are reflexive to our ways of making them accountable. (p. 48-49)

The final core notion, indexicality, derives from the concept of *indexical expressions:* a broad class of terms including many of the most common English pronouns such as *he*, *she*, and *it*, and deictic expressions such as *here*, *this*, and *over there*. The meaning of such an expression is not static but "relative to the speaker" and its use "depends upon the relation of the user to the object with which the word is concerned" (Garfinkel, 1967, pp. 4-5). To provide an example, the deictic expression *here* can refer to various places depending on the context in which it is used: "I'm right *here* [behind you]", or, "Put it *here* [on the table]". While the notion of indexical expressions was originally limited to refer to such particular kinds of words and expressions, it was ascribed a broader meaning within ethnomethodology and came to include "the entire field of language use that ethnomethodologists investigate" (Lynch, 1993, p. 18). This is evident from Garfinkel's (1967) way of referring to ethnomethodology as the investigation of indexical expressions: "I use the term 'ethnomethodology' to refer to the investigation of the rational properties of indexical expressions and other practical actions as contingent ongoing accomplishments of organized artful practices of everyday life" (p. 11). Hence, the argument is not that only certain words are indexical, but *all* expressions and actions are indexical and tied to the circumstances of their production. An example of the indexical property of an ordinary utterance is provided by Francis and Hester (2004, p. 116) through the analysis of an extract showing the opening of a university lecture[8]. The extract starts with a greeting, "Good afternoon", from the lecturer. While such a greeting would in most other situations generate a similar greeting in return, it is, judging by the students' next actions (they provide no greetings in return but silently direct their attention towards the lecturer), in this context not understood as a greeting, but instead as an announcement that the lecture is

[8] See also Payne (1976) for a similar analysis of how the opening of a history lesson in a secondary school is interactionally organised.

about to begin. As implied by this example, the meaning of an utterance is thus not "stable or objective", but varies depending on the context in which it is used.

What has been presented so far are some of the main characteristics of Garfinkel's ethnomethodological approach that arose in the 1950s as a response and alternative to conventional sociology (Hester & Francis 2000a; Llewellyn, 2014). However, as is the case with most traditions, ethnomethodology has not remained a homogeneous field but a number of different strands with specific areas of interests have evolved over the years (Maynard & Clayman, 1991). One such strand is the *ethnomethodological studies of work* (see, e.g., Garfinkel, 1986) that emerged in the 1970s. Initially, these studies were largely conducted by Garfinkel and his students, and took an interest in "the everyday details of very specialized activities" (ten Have, 2013, p. 2), particularly in the natural sciences (e.g., Garfinkel, Lynch & Livingston, 1981) and mathematics (e.g., Livingston, 1986). Using ethnographic methods[9], the studies sought to capture the so-called *interactional whatness* of the work practices under study, that is, the details of how these practices were organised and practically accomplished (Lynch, 1993). Here it useful to note that in the ethnomethodological sense, *work,* as it is used in *work practices,* does not necessarily refer to *job* or *occupation* but to the *doing* of certain activities:

> 'work' in the phrase 'work practices' is referring to 'doing'. Now, of course, 'doing' is certainly found in the workplace and associated with work related activities, but it is also found outside the workplace and associated with other things than job related activities. There is as much 'work/doing', involved in the leisure pursuit of gardening as there is in the job or occupation of the landscape gardener. Not in terms of effort, but in terms of understanding and working out what has to be done, where, and when. (Button, 2012, p. 675)

As Button points out, while job-related activities certainly involve a lot of work/doing there is as much work/doing involved in gaining an understanding of how a number of activities found outside occupational settings are to be carried out. Consequently, ethnomethodological studies of work, no matter what the title implies, are not merely concerned with *workplace* activities, but also non-occupational activities. Some examples provided by Button (2012) are:

[9] It should be noted that the ethnographic approach used within ethnomethodology differs from conventional ethnography in that "EM looks for order properties rather than culture, beliefs, or symbolic meaning" (Rawls, 2008, p. 709).

(doing) playing jazz piano (Sudnow, 1978), (doing) playing video games (Sudnow, 1984), and (doing) playing with a dog (Goode, 2007).

An additional form of work that has been a focus of ethnomethodological investigations since the 1960s is that of (doing) teaching/instruction. Garfinkel and Sudnow (2002), for instance, explored the work of teaching in chemistry lectures for undergraduates and identified "an ignored, content-specific massive orderliness of lectures as university-specific work" (p. 219). Further, Hester and Francis (2000a), in mapping ethnomethodological studies of educational phenomena conducted until the 1990s, identified a number of broad themes within this corpus, of which the most frequently investigated is that of *classroom order and management*. As stated by Hester and Francis (2000a) this theme covers a diverse range of work including, for instance, studies focusing on *classroom control and the identification and management of deviance* (e.g., Payne & Hustler, 1980; 1982; Macbeth, 1990; 1992), and on the *sequential organization of interaction between teachers and pupils,* the latter of which Hugh Mehan's seminal publication *Learning Lessons*: *Social Organisation in the Classroom* (1979a) on the organisation of classroom discourse can be taken as an example.

The ethnomethodological interest in instructional work remains, although relatively few studies conducted over the past two decades draw exclusively on ethnomethodology. Instead, a majority of these studies are more or less influenced by conversation analysis. In the next section, some of the fundamentals of the conversation analytic perspective are presented.

Conversation analysis

Conversation analysis (CA) is a development of ethnomethodology that emerged in the 1960s as the result of the work of Harvey Sacks (1935-1975), Emanuel Schegloff (1937-) and Gail Jefferson[10] (1938-2008) (Goodwin & Heritage, 1990; Maynard & Clayman, 1991). In his early work, Sacks, who was the lead figure of this group, was heavily influenced by Garfinkel's ethnomethodological initiatives and shared the ethnomethodological interest in members'

[10] In some presentations of conversation analysis, the well-known sociologist Erving Goffman (1922-1982), who was also a former teacher of Sacks and Schegloff, is ascribed a prominent role in the development of the tradition (see, e.g., Gardner, 2004; Heritage, 2009; Sidnell, 2010). In the introduction to Sacks' lectures of conversation (1992), however, Schegloff maintains that although Sacks was during his years as a graduate student influenced by Goffman's work his later work clearly diverged from Goffman's. Therefore, as suggested by Schegloff (1992a) "the degree to which Goffman influenced more specifically the work for which Sacks is known remains an open question" (p. xxiv).

practical reasoning in everyday life and institutional settings (Lynch, 1993; Maynard & Clayman, 2003). During the 1960s and early 1970s, Garfinkel and Sacks had an ongoing collaboration resulting in, for instance, a co-authored publication on the orderliness of indexical expressions (Garfinkel & Sacks, 1970), an issue of central concern to both ethnomethodology and conversation analysis (Maynard & Clayman, 2003). Despite certain common interests and concerns, however, ethnomethodology and conversation analysis from the 1960s developed as two distinct perspectives (Lynch, 1993; Maynard & Clayman, 2003; ten Have; 2013). Maynard and Clayman (2003) summarise the main differences between ethnomethodology and conversation analysis in the following way:

> Substantively, ethnomethodology's broad concern with diverse forms of practical reasoning and embodied action contrasts with the conversation analytic focus on the comparatively restricted domain of talk-in-interaction and its various constituent activity systems (e.g., turn taking, sequencing, repair, gaze direction, institutional specializations). Methodologically, ethnomethodology's use of ethnography and quasi-experimental demonstrations contrasts with the emphasis on audio- and video recordings of naturally occurring interaction within CA. (p. 176)

As stated by Maynard and Clayman (2003), ethnomethodology and conversation analysis differ both in terms of analytical orientation and methodology: while ethnomethodological studies typically use ethnographic methods and are broadly concerned with how diverse forms of members' practical reasoning are locally produced and accomplished, conversation analytic investigations draw on audio/video recorded data and focus on the various constituent activity systems[11] of spoken interaction, or *talk-in-interaction* to use the conversation analytic notion[12]. As examples of such activity systems Maynard and Clayman (2003) mention, for instance, *turn taking*, *sequencing,* and *repair*. These constitute fundamental and generic orders of organisation in talk-in-interaction (Schegloff, 2007), and will therefore be presented in further detail below. In addition, two other domains of organisation that have been subject to frequent conversation

[11] Maynard and Clayman (2003) do not specify what is meant by "activity systems". As described by Goodwin (2000a), however, activity systems may be encompassed of "a range of structurally different kinds of sign phenomena in both the stream of speech and the body, graphic and socially sedimented structure in the surround, sequential organization" (p. 1490)

[12] It should be noted that these descriptions are somewhat "stereotypical". There are plenty of examples of ethnomethodological and conversation analytic studies that do not follow the mainstream approaches. To provide an example, some of the studies in *Studies in ethnomethodology* (Garfinkel, 1967) are based on experiments and interviews rather than ethnographic methods.

analytic investigations will be introduced: *preference/preference organization* and *epistemics*.

Beginning with turn taking, this is a fundamental resource on which people talking to each other rely to maintain a conversation in which they speak one at a time (Schegloff, 2007). As Drew (2005) puts it:

> Whatever conversations may be about, whatever topics are covered, whoever and however many take part, whatever their similarities or differences may be, in whatever circumstances, it is fundamental to conversation that one speaker takes a turn and is followed by another speaker (p. 80).

As expressed in conversation analytic terms, speakers involved in a conversation take *turns* to talk, and they do it one at a time (albeit with more or less overlap). Speakers' turns-at-talk are built out of components, so-called *turn-constructional units* (TCUs), which can be sentences, clauses, phrases or individual words (Clayman, 2013). A turn-at-talk can be constructed of one single or several TCUs, each performing a recognisable action, such as doing an offer, answering a question, et cetera (Schegloff, 2007). To determine what action/s is performed through a turn-at-talk, conversation analysts in contrast to, for example, implementers of speech act theory (see e.g., Searle, Kieffer & Bierwisch, 1980) do not start from "*the names of types of action*, [nor] from *classes* of actions" (Schegloff, 2007, p. 8, emphasis in original), but instead look at the next turn-at-talk to see what understanding it displays. The inspection of the next turn in order to see how the prior turn is understood by its recipient is referred to as "the next turn proof procedure" (Sacks, Schegloff & Jefferson 1974; Sidnell, 2010) and constitutes a fundamental validation procedure for conversation analytic research (Peräkylä, 2011).

Change of speakership does not occur haphazardly in a conversation, but takes place at so called *transition-relevance places* that are projected through different resources such as syntax, prosody, and gaze (Clayman, 2013). When a first speaker approaches a possible completion of a TCU, transition to a second speaker becomes possibly relevant, but does not necessarily occur (Schegloff, 2007). As described by Clayman (2013):

> Each TCU is a coherent and self-contained utterance, recognizable in context as 'possibly complete'. Each TCU's completion establishes a *transition-relevance place* (henceforth TRP [...]) where a change of speakership becomes a salient possibility that may or may not be realized at any particular TRP (p. 151, emphasis in original).

Whether speaker transition occurs or not at a TRP is contingent on a set of rules to which the speakers themselves orient. Sidnell (2010) summarises these rules[13] in the following way:

> A next speaker may have been selected to speak next by the current turn (e.g. an addressed question). If this is the case, the one so selected should speak at the first point of possible completion. If, however, no speaker has been selected by the current turn, at its possible completion any other party may self-select. If no speaker has been selected and no other party self-selects at the possible completion of the current turn, the current speaker may continue. (p. 43)

As can be seen from the above quotation, there are two main ways in which change of speakership can be organised: a next speaker can be selected by the current speaker, or a speaker can self-select as the next speaker. There are several different techniques for next-speaker selection (e.g., directing gaze at someone or using an address term) and self-selection (e.g., start speaking in overlap with the ongoing turn or doing bodily or facial gestures) that are employed by speakers in conversation (Hayashi, 2013; Sidnell, 2010). Descriptions of these techniques will not be provided here, however, but can be found in, for instance, the turn-taking paper by Sacks et al. (1974).

Sequencing, or s*equence organization,* is in name similar to another core concept of conversation analysis, *sequential organization*. Schegloff (2007) points out that the latter is the more general term which is used to refer to "any kind of organization which concerns the relative positioning of turns" (p. 2). In the words of Schegloff (2007), the scope of sequence organization is "the organization of courses of action enacted through turns-at-talk – coherent, orderly, meaningful successions or 'sequences' of actions or 'moves'" (p. 2). The most basic organising format/unit for sequences of actions is the so-called *adjacency pair:* two adjacently placed turns produced by a first and a second speaker, such as a greeting, an invitation, or a question by the first speaker (a first pair part, FPP), and a second greeting, an acceptance/declination, or an answer by the second speaker (a second pair part, SPP) (Schegloff, 2007; Stivers, 2013). An adjacency pair can form a whole sequence (for instance, a greeting sequence consisting of a "hello" by the first speaker and a "hello" in return by the second speaker), but it can also be expanded in various ways (Stivers, 2013). As outlined by Schegloff (2007), expansions of adjacency pairs can occur in three possible places/sequential positions: "before the first pair part, in what we will call pre-

[13] For a more detailed outline of the rules of speaker transition, see for example Sacks et al. (1974).

expansions; between the first and the projected second pair part, in what we will call insert expansions; and after the second pair part, in what we will call post-expansions" (p. 26).

Beginning with *pre-expansions,* these are sequences that are preliminary to and lay the groundwork for the first pair part of a base pair type sequence, such as an invitation, a request or an announcement (Schegloff, 2007; Stivers, 2013). Being sequences, and being recognisably "pre" to other sequences, pre-expansions can be termed "pre-sequences". Type-specific pre-expansions, for instance, pre-invitations and pre-requests, are typically designed to check the alignment and availability of the recipient in order to secure successful accomplishment of the base first pair part (Sidnell, 2010). For example, before doing an invitation, the inviter may check the availability of the invitee through a pre-invitation (e.g., "what are you doing on Saturday?") which provides the invitee with the opportunity to display his/her stance towards the invitation before it is actually produced. A "go-ahead" response by the invitee (e.g., "nothing special") signals that the invitation is likely to be accepted and encourages the inviter to produce the base first pair part which the pre-sequence was projecting, while a "blocking" response (e.g., "I'm going to the movies") signals that the invitation will likely be rejected and thereby discourages production of the invitation (Schegloff, 2007).

An *insert expansion* is a sub-sequence that is inserted between the first and second pair part of the base adjacency pair "to address matters which need to be dealt with in order to enable the doing of the base second pair part" (Schegloff, 2007, p. 99). There are two kinds of insert expansions, "post-firsts" and "pre-seconds", which as the names imply are either backward looking and oriented to issues/troubles with the just produced first pair part or forward looking and oriented to promoting the production of the second pair part (Sidnell, 2010; Stivers, 2013). Post-first insert sequences usually take the form of so-called "repair sequences" (see the following paragraph on repair), that is, sequences that address problems related to the hearing or understanding of the preceding talk. Typically, the recipient of the first pair part initiates the repair, for example through a question (e.g., "who?", "where?", "what?"), but leaves the first speaker to accomplish it (e.g., by repeating or explicating the preceding talk). Pre-second insert expansions, by contrast, are oriented to the expected second pair, that is, the response that the recipient of the first pair part will give in the next turn (Schegloff, 2007; Stivers, 2013).

Finally, a *post-expansion* follows after the production of a base second pair part, that is, after a request has been granted or declined or after an invitation has been accepted or rejected. Such expansions can be minimal (consisting of one turn) or non-minimal (consisting of at least one turn). The difference between these two types of post-expansions is related to the amount of turns, and also to their orientation to the response provided by the second pair part. To illustrate this, a minimal post-expansion treats the response as adequate for sequence closure, and a non-minimal post-expansion does the opposite, that is, rather than proposing sequence closing it invites for further elaboration or qualification of the preceding response (Stivers, 2013).

Repair is an organised set of practices on which conversational parties rely to address and resolve troubles in speaking, hearing, and understanding the talk to maintain or restore intersubjectivity (Kitzinger, 2013; Sidnell, 2010). As summarised by Sidnell (2010), troubles related to speaking, hearing or understanding may arise under the following circumstances:

> Troubles of speaking arise, for instance, when a speaker uses the wrong word or cannot find the exact word they want. Troubles of hearing arise when a hearer cannot make out what the speaker has said. Troubles of understanding arise within a variety of circumstances, such as when the hearer does not recognize a particular word used, does not know who or what is being talked about, or cannot parse the grammatical structure of an utterance. (p. 110)

The segment of talk that causes the trouble is referred to as the *trouble source* or the *repairable* (Kitzinger, 2013; Schegloff, 2007). As pointed out by Schegloff (2007), a trouble source is not necessarily an "objective" or "obvious" problem (e.g., an error in grammar or pronunciation). Instead, any piece of talk can be treated as in need of repair. A repair sequence starts with the identification of the trouble source (initiation of repair) and continues with the production of a repair solution (completion of repair). The initiation of repair can be done either by the speaker of the trouble source (self-initiation) or by another speaker involved in the conversation (other-initiation). Likewise, a repair can be either self- or other-completed, that is, a repair solution can be produced either by the speaker of the trouble source (self-completion) or by another speaker (other-completion). In ordinary conversation, it is most common that the speaker of the trouble source completes the repair (Schegloff, 2007). This is because correcting others' speech is usually treated as a socially problematic, or *dispreferred*, action (see the following paragraph on preference).

Put simply, the idea of preference organization is that when there is the possibility of alternative actions, one (or some) is preferred, that is, "expected and chosen if possible" (ten Have, 2007, p. 137) over another (or others). As previously mentioned, most first pair parts (FPPs) make relevant for more than one response alternative (Schegloff, 2007). An invitation, for instance, makes relevant for an acceptance or a declination, and a request makes relevant for a grant or a rejection[14]. While both an acceptance and a declination are equally relevant as responses to an invitation, and a grant and a rejection are equally relevant as responses to a request, they are not "symmetrical alternatives" (Schegloff, 2007; Schegloff & Sacks, 1973), but there is a *preference* for one response alternative over the other.

It is important to note that preference in this sense does not refer to psychological preferences of the speakers, that is, it does not have to do with the inviter's/requester's motives and what kind of answer he or she wants/prefers from the recipient, and neither does it concern the recipient's personal feelings and desires in relation to the invitation/request. As a conversation analytic notion, preference relates to the structural relationship of sequence parts, or, to express it somewhat differently, what kind of response is interactionally projected by the initiating action (Scehgloff, 2007). As Schegloff (2007) states: "[s]equences are the vehicle for getting some activity accomplished, and that response to the first pair part which embodies or favors furthering or the accomplishment of the activity is the favored – or, as we shall term it, the preferred second pair part" (p. 59). Most invitations project acceptances, and most requests project grants. These are the response alternatives that favour the accomplishment of these actions, that is, the *preferred* response alternatives, while declinations and rejections embody problem in their realisation and thus constitute the *dispreferred* response alternatives (Schegloff, 2007).

Whether a response constitutes the preferred or dispreferred alternative is revealed by its turn shape (ten Have, 2007). Responses that align with the initiating actions – preferred responses – are typically "short and to the point" (Schegloff, 2007, p. 65), that is, produced in explicit terms without delay or hesitation (Pomerantz & Heritage, 2013). Dispreferred responses, in contrast, are typically elaborated and produced with delays, mitigations, hedges, disclaimers, accounts and excuses (Pomerantz & Heritage, 2013; Schegloff, 2007). What

[14] It should be noted here that acceptances, declinations, grants, and rejections are *types* of responses that can be designed in a variety of ways. An acceptance, for instance, can be done through a single word, "yes", or through a more elaborate utterance, "yes, that would be really nice, thank you".

has been described so far is the preferences related to responding actions/second pair parts. However, preference can also be a feature of initiating actions. Delivery of bad news, other-repairs, other-corrections, requests, and advice-giving are examples of initiating actions that are frequently oriented to as interactionally problematic and, as a consequence, avoided, minimised, or performed with great caution by speakers (Pomerantz & Heritage, 2013).

The last notion to be presented is that of epistemics. In the words of Heritage (2013), conversation analytic research on epistemics "focuses on the knowledge claims that interactants assert, contest and defend in and through turns-at-talk and sequences of interaction" (p. 370). As it appears from the quotation, the concern is how speakers orient to and topicalize what they know relative to other speakers. Such an interest presupposes that there is a connection between what speakers know and what they do (Sharrock, 1974), that is, a view of knowledge as something that is displayed and managed in and through talk-in-interaction, rather than, as static information solely located and processed in the minds of individuals (Potter & Edwards, 2013; Stivers, Mondada & Steensig, 2011). As put by Potter and Edwards (2013) research on epistemics starts from the assumption that "the organization of conversation lays out the 'epistemic landscape' for the participants, highlighting who is knowledgeable (K+) or who is not (K-), to whatever degree, on relevant matters" (pp. 712-713).

Essential when analysing epistemic order in interaction is to distinguish between *epistemic status* and *epistemic stance* (Heritage, 2012a; 2013). The former concerns the speakers' "joint recognition of their comparative access, knowledgeability, and rights relative to some domain of knowledge as a matter of more or less established fact" (Heritage, 2013, p. 376). A domain of knowledge (also referred to as *epistemic domain* and *territory of knowledge*), can be for example a profession, a hobby, or a happening, but also the speakers' feelings, experiences, or thoughts (Heritage, 2013). In more specific terms, epistemic status "embraces what is known, how it is known (through what method, with what degree of definiteness, certainty, recency, etc.) and persons' rights, responsibilities and obligations to know it" (Heritage, 2013, p. 377). *Epistemic stance,* in turn, concerns "how speakers position themselves in terms of epistemic status in and through the design of turns at talk" (Heritage, 2012a, p. 33)[15].

[15] It may be worth noting that there is a recent debate on whether the conceptual apparatus of epistemics is consistent with the conversation analytic concern with the demonstrable sequential order of social actions. The debate was initiated with a special issue (Discourse Studies, Volume 18 Issue 5,

Despite what the name implies, conversation analysis is not a linguistic project. Instead, the primary concern of conversation analytic research is with "the culturally-methodic character of social action and interaction" (Watson, 1994, p. 169) as enacted through talk. In view of this, and given that conversation analysis is not restricted in its application to talk that can be considered as *conversation* in its proper sense but can be applied to other forms of talk-in-interaction as well (e.g., classroom teaching, news interviews, medical consultations et cetera), conversation analysis can be regarded as a misnomer for the perspective (Drew, 2005). It should be noted, however, that conversation analysis for some period of time was actually primarily concerned with ordinary conversation. While Sacks in his early work took an interest in the methodical ways in which institutionally based conversations were organised, he later on turned his attention towards ordinary conversation; an interest that was maintained by those who continued to develop the conversation analytic approach after Sacks' death in 1975 (ten Have, 2007). The interest in institutional interactions was later resumed, with the emergence of a field of studies that sought to explore the organisation of institutional talk and interactions in various settings such as classrooms (McHoul, 1978), medical consultations (Silverman, 1987), news interviews (Greatbatch, 1988), and police emergency services (Zimmerman, 1984) (Hester & Francis, 2000b). As maintained by Hester and Francis (2000b), a common purpose of these studies, that are usually referred to as *studies of institutional talk* or *the institutional talk program*, was to identify the systematic ways in which *institutional* talk-in-interaction differed from *ordinary* talk-in-interaction. In the introduction to the collection of studies entitled *Talk at work: Interaction in institutional settings,* Drew and Heritage (1992) provide the following characterisation of institutional talk-in-interaction:

> Institutional interactions may take place face to face or over the telephone. They may occur within a designated physical setting, for example a hospital, courtroom, or educational establishment, but they are by no means restricted to such settings. Just as people in a workplace may talk together about matters unconnected with their work, so too places not usually considered 'institutional,' for example a private home, may become the settings for work-related interactions. Thus the institutionality of an interaction is not determined by its setting. Rather, interaction is institutional insofar as participants' institutional or professional identities are somehow made relevant to the work activities in which they are engaged. (p. 3-4)

October 2016) that then received a response in another special issue (Discourse Studies, Volume 20 Issue 1, February 2018).

As highlighted in the quotation, it is not the *physical setting* in which an interaction occurs that makes it institutional, but rather the participants' invocation of or orientation towards their institutional or professional identities as they carry out the activity they are engaged in. As an example, Drew and Heritage (1992) take the *IRE/F sequence* – a three-turn instructional sequence in which the first turn consists of a pedagogical question (*I*nitiation), the second of an answer by the recipient (*R*esponse), and the third turn of *E*valuation or *F*eedback from the questioner (see, e.g., Mehan, 1979b) – that typically occurs in classrooms. As stressed by Drew and Heritage (1992), however, the IRE/F-sequence is characteristic to the classroom "*only* because it is generated out of the management of the activity (instruction) which is the institutionalised and recurrent activity in the setting" (p. 40, emphasis in original). Consequently, the sequence is not tied to the physical classroom space, but to the activity of instruction (which can take place in a variety of settings).

As indicated by the example presented above, classroom interaction is one of the areas of interest to the conversation analytic research on institutional talk. According to a relatively recent review of conversation analytic classroom research, a major strand within this corpus of studies aligns with the tradition of the institutional talk research: "work that investigates interactional practices of classroom talk" (Gardner, 2013b, p. 593). This strand of studies has largely explored the turn-taking organisations that are characteristic to classroom talk, taking a particular interest in the three foundational organisations presented earlier in this chapter: turn-taking, sequence organization, and repair (Drew & Heritage, 1992; Gardner, 2013b; Heritage, 2005). Referring to research on conversational turn-taking, a major part of this research, apart from the seminal paper on turn-taking by Sacks et al. (1974), has been conducted in classroom contexts (Gardner, 2013b). An early study by McHoul (1978), for instance, explored the process of selecting a next speaker in the classroom and found it to be largely dominated by the teacher. Although modern classrooms tend to be less teacher-centred (Gardner, 2013b), more recent studies have shown that this rule-set for turn-taking is still present (e.g., Seedhouse, 2004).

Among the studies that have investigated sequence organization in the classroom many have focused on the aforementioned three-turn IRE/F sequence (e.g., Lee, 2007; Margutti & Drew, 2014; Mehan, 1979b; McHoul, 1978; Sinclair & Coulthard, 1975). For instance, Mehan (1979b) demonstrated how this instructional sequence differs from question-answer-sequences that occur in ordinary conversation, both in terms of the character of the first-position question

and the third-position uptake of the second position response. While first-position questions in ordinary conversation are typically information-seeking, that is, asked because "the questioner does not have the information, assumes that the respondent has the information, and has an immediate need for the information" (Mehan, 1979b, p. 286), the correct answer to an instructional question is often known by the questioner. Further, while the third turn of an ordinary question–answer sequence usually provides some form of *acknowledgement* of the second speaker's response (e.g., "thank you"), the third turn of an IRE/F-sequence provides *evaluation* or *feedback* on the second speaker's response (e.g., "very good"; for a more comprehensive description and examples, see, e.g., Mehan, 1979b).

The organisation of repair has been extensively explored in ordinary conversation where a preference for self-initiation and self-completion over other-initiation and other-completion of repair has been identified (e.g., Schegloff, Jefferson & Sacks, 1977). However, in studying the organisation of repair in the classroom, McHoul (1990) demonstrated a reversed preference structure for initiation of repair: repairs in the classroom were frequently other(teacher)-initiated rather than self(student)-initiated. This finding was later criticised by Macbeth (2004), who questioned the direct comparison between the organisation of classroom correction and repair in ordinary conversation:

> Though correction may be a kind of repair in natural conversation, in classrooms these actions share a different category relationship: Corrections in classrooms is an identifying task and achievement of classroom teaching. As is true of all discursive practical action, repair is then omnirelevant to it, having to do with the first achievements of common understanding that classroom lessons – and their correction sequences – rely upon and reflexively display. (p. 705)

As argued by Macbeth above, a distinction should be made between correction in natural conversation and classroom correction: while the former can be regarded as a form of repair doing the work of maintaining intersubjectivity in conversation by replacing "an 'error' or 'mistake' by what is 'correct'" (Schegloff et al., 1977, p. 363; see also Schegloff, 1992b), the latter is not restricted to conversational actions but can also point to incorrect or problematic execution of educational tasks, actions or activities (for examples see, e.g., Ekström & Lindwall, 2014; Hindmarsh, Hyland & Banerjee, 2014; Keevallik, 2010; Levin et al., 2017; Lindwall & Ekström, 2012; Weeks, 1985). In contrast to conversational other-corrections that similar to other-repair tend to be treated as

interactionally dispreferred activities (e.g., Jefferson, 1987), instructional other-corrections are often oriented to as interactionally unproblematic due to their self-evident "special motive". In the words of Macbeth (2004) "[i]nstruction in competent performance per see is the correction's warrant, and in that sense its motive" (p. 727). For this reason, Macbeth (2004) maintains that classroom correction and repair are "poor candidates for comparative analysis" (p. 715).

So far, the chapter has presented some basic characteristics of ethnomethodology and conversation analysis, as well as different strands of research within these traditions, respectively. In addition to research informed by either perspective, however, there are studies that draw on both. The premises of a selection of these studies are presented in the next section.

EM and CA as frameworks for studying professional conduct and instruction-in-interaction

Despite the differences between ethnomethodology and conversation analysis that occurred at an early stage, a close connection between the two perspectives remained. In one of his lectures held in the 1970s, Sacks (1984) argued that a domain of research informed by both ethnomethodology and conversation analysis had emerged:

> I want to propose that a domain of research exists that is not part of any other established science. The domain is one that those who are pursuing it have come to call ethnomethodology/conversation analysis. That domain seeks to describe methods persons use in doing social life. It is our claim that, although the range of activities this domain describes may be as yet unknown, the mode of description, the way it is cast, is intrinsically stable. (p. 22)

The *ethnomethodology/conversation analysis* domain of research (often abbreviated *EM/CA*) characterised by Sacks four decades ago is today mainly represented by video-based studies with an interest in the organisation of workplace and educational activities in various settings. Although these studies are not to be regarded as a completely homogenous field, they share an interest in "action and activity, as effectuated through language and the body" (Hindmarsh & Llewellyn, 2010, p. 25), which is addressed through the analysis of video recorded data. An example of research adopting such an approach is a field known

as *workplace studies*[16] that emerged in the 1990s (e.g., Heath, Knoblauch, & Luff, 2000; Luff et al., 2000). Of special interest to these studies is how tools and technologies feature in the day-to-day accomplishment of practical organisational conduct in various workplace settings (Heath et al., 2000, p. 308), for example, airline operations rooms (e.g., Goodwin & Goodwin, 1996; Suchman, 1996), telecommunications control centres (e.g., Heath & Luff, 1992; Hindmarsh & Heath, 2000), operating rooms and medical consultations (e.g., Heath, 1986; Hindmarsh & Pilnick, 2007), and financial institutions (e.g., Jirotk, Luff & Heath, 1993). Using video recordings in combination with extensive ethnographic fieldwork as their empirical basis, the studies set out to show "the ways in which the visual, the vocal, and the material, feature with talk in the production and co-ordination of organizational conduct" (Heath et al., 2000, p. 314). A similar analytical approach is adopted by a group of contemporary video studies that share an interest in how professional knowledge is made visible in interactions between experts and laymen/novices/junior parties (e.g., Goodwin, 1994; 1995; 1997; 2000b; Kawatoko, 2000; Phillabaum, 2005). An example is a seminal study by Goodwin (1994) that demonstrates how expert parties in two different contexts, an archaeological field excavation and a legal argumentation, utilise discursive, embodied, and material practices to demonstrate their *professional vision* to laymen/novices. In the words of Goodwin (1994), professional vision "consists of socially organized ways of seeing and understanding events that are answerable to the distinctive interests of a particular social group" (p. 606). In the former mentioned case, the demonstration of professional vision involves a senior archaeologist instructing a student on how to make dirt measurements for a map illustrating the different layers of dirt in the excavation area, a skill that is central to archaeology as a profession:

> the ability to see in the very complex perceptual field provided by the landscape to which they are attending those few events that count as points to be transferred to the map, are central to what it means to see the world as an archaeologist and to use that seeing to build the artifacts, such as this map, that are constitutive of archaeology as a profession. All competent archaeologists are expected to be able to do this; it is an essential part of what it means to *be* an archaeologist (Goodwin, 1994, p. 615, emphasis in original).

[16] Although many workplace studies draw on ethnomethodology and conversation analysis, it should be noted that there are additional analytic orientations informing the field, e.g., distributed cognition, symbolic interactionism, and activity theory (Heath et al., 2000).

While the study by Goodwin cited above, as well as the other aforementioned studies, focus on what knowledge and competencies are characteristic of different professional groups, and how this knowledge and competencies are made visible in verbal and non-verbal interactions, a growing corpus of more recent studies direct the attention towards how professional knowledge, skills, and competences are being explicitly taught in contexts such as architectural education (e.g., Lymer, 2009; 2013), dental education (e.g., Hindmarsh et al., 2014; Hindmarsh, Reynolds, & Dunne, 2009; Lindwall et al., 2014; Lindwall & Lymer, 2014), driving education (e.g., Broth, Cromdahl & Levin, 2018; De Stefani & Gazin, 2014), dance lessons (Keevallik, 2010), and a textile crafts course (e.g., Lindwall & Ekström, 2012). In common to the latter mentioned strand of studies, to which this thesis aligns, is an interest in how instruction[17] and responses to instruction are sequentially organised. As outlined in an overview of conversation analytic studies of classroom interaction such interest can imply paying attention to:

> the machineries of turn-taking (with attendant features of timing, turn transitions, nonverbal behaviors) and of sequence organization (with second-position answers displaying how questions have been understood, and third position teacher assessments displaying how answers have been understood), and a subsequent question displaying how the prior sequence has been understood), as well as to repair as revealing problems of understanding (Gardner, 2013b, p. 609).

As indicated in the quotation, studies with an interest in instruction typically do not have as a primary goal to detail the organisation of conversational actions per se. Rather, the interest lies in demonstrating the pedagogical implications of the organisation of such actions as incorporated in instructional sequences (e.g., how the design and sequential environment of a teacher question make relevant for a certain kind of student response). In relation to the studies included in this thesis, this implies providing detailed accounts of how the teachers'/facilitators'

[17] It should be noted that the term instruction has a slightly different meaning in British and American English. As outlined by Black and Wiliam (2009): "In much of the English-speaking world, this term has a connotation of training, or didactic approaches to teaching. However, in American English, the term 'instruction' means the combination of teaching and learning" (p. 9). As pointed out by Lindwall et al. (2015), moreover, the term instruction can also refer to "certain social actions, such as orders or directives" (p. 145) and to "a written text such as a manual, recipe or a guidebook" (p. 145). In both these cases the term is typically used in its plural form. In theory, the different senses of the term instruction can be isolated, but in practice this is not always as easily done. Hence, although the thesis mainly focuses on instruction-as-teaching/education, the other forms of instruction(s) are also occasionally addressed.

instructions (e.g., questions) are designed and delivered; what the students understand these instructions to be doing (e.g., eliciting self- or peer-assessments) and how they respond to them (e.g., with acceptance or resistance); and how next actions by instructors or peer students (e.g., acknowledgements, correction, advice, invitations for further elaboration) are contingent on these responses. Unlike many other educational investigations, those of the thesis do not start from a theory or model of instruction (see also Lindwall et al., 2015), but in line with the analytical frameworks of ethnomethodology and conversation analysis "problems" are approached from the perspective of the participants of the setting (see Chapter 6 for a more detailed explanation).

In summary, this chapter has presented the fundamentals of ethnomethodology and conversation analysis, and some different ways of addressing instructional work based on these perspectives. While the research discussed in the chapter informs the thesis in terms of theoretical and methodological starting points, not all of this research addresses phenomena and activities of interest to the thesis. In the next chapter, a selection of studies for which also the results constitute a relevant background are summarised.

4. Interactional studies of feedback and instructional guidance

As outlined in previous chapters, the thesis takes an interest in issues related to how students provide formative feedback on their own performance and that of their peers, how teachers/instructors elicit and guide such feedback contributions, and how different conceptual models and principles of good practice feature in the feedback activities. In previous research, formative assessment and feedback have been studied in a variety of contexts within higher and professional education and from different theoretical and methodological perspectives. This research is extensive and therefore not possible to summarise in its entirety within the scope of this thesis. Therefore, the focus has been directed to the literature that provides a relevant background for the empirical studies of the thesis. Chapter 2 summarised literature on feedback and learner self-reflection in healthcare simulation debriefings, which is the empirical context of the studies. As mentioned at the end of that chapter, the theoretical starting points, methods, and research interests of the research conducted within the healthcare simulation training field differ substantially from those of the thesis. Hence, although the research discussed in Chapter 2 provides a background that facilitates the understanding of the research reported in the thesis, it investigates different phenomena. The same applies to the bulk of educational research on formative feedback in higher and professional education, which focuses on attitudes towards, and outcomes of, assessment and feedback activities rather than how they are organised and accomplished in real-time practice.

The aim of the present chapter is to present and discuss previous empirical work which shares an interest in similar phenomena as those investigated in the studies of the thesis, and which draw on similar theoretical and methodological starting points. As outlined in the previous chapter, there is a small but substantial corpus of video-based studies informed by ethnomethodology and conversation analysis that investigates instructional work in contexts of higher and professional education. Although many of these studies are relevant in terms of analytical approach and/or empirical context, such as interactional studies of simulation-based professional training (e.g., Hindmarsh et al., 2014; Hontvedt

& Arnseth, 2013; Rystedt & Sjöblom, 2012; Sellberg & Lundin, 2018), this chapter only discusses work for which the results are of direct relevance to the empirical studies of the thesis. This includes studies that investigate how students evaluate and give oral formative feedback on their own or each other's work or performance in meetings/sessions that take place after the accomplishment of the work/performance, and studies focusing on how teachers/instructors work to guide students in reflecting upon, evaluating, and commenting on work/performance in the contexts of higher and professional education. The chapter is divided in two sub-sections: the first discusses studies of self- and peer-directed feedback by students, and the second summarises work that concentrates on how teachers work to elicit and guide student reflection, feedback, and pedagogical reasoning.

Self- and peer-directed feedback by students

The organisation of self- and peer-directed feedback by students has been investigated both in multiparty constellations, for example, in feedback meetings in which a teacher and a group of students jointly discuss the performance of the students (e.g., Copland, 2010; 2011, 2012; Copland & Mann, 2009; Ekström, 2013), and in one-to-one constellations, such as in tutoring sessions between a student tutor and a student tutee (e.g., Park, 2014; 2017; Tsai, 2017; Tsai & Kinginger, 2015; Waring, 2005; 2007a, 2007b). Some of these studies focus broadly on actions that address the learners' work or performance, grouped under the umbrella term feedback (see, e.g., Copland's studies). Other studies set the focus more narrowly in investigating one specific action such as *assessment* or *advice* (e.g., Park, 2014; 2017; Tsai, 2017; Tsai & Kinginger, 2015; Waring, 2005; 2007a; 2007b). In studies of talk-in-interaction, the term assessment is commonly used to refer to conversational actions through which speakers evaluate[18] persons, objects, events or other phenomena (see, e.g., Goodwin, 1986; Goodwin & Goodwin, 1987; Edwards & Potter, 2017; Pomerantz, 1984). The term advice refers to conversational actions through which one speaker (the

[18] The term evaluation is often used synonymously with assessment which suggests that there is no major difference between these two terms. From the way the terms are used in some literature, however, it seems that evaluation is an activity accomplished through assessment (see, e.g., Goodwin & Goodwin, 1987; Wiggins & Potter, 2003). To provide an example, Goodwin and Goodwin (1987) initially state that they will examine "the process of assessing or evaluating entities" (p. 3) which suggests that the terms will be used synonymously. Later in the text, however, the authors describe the word *assessable* as referring to "the entity being evaluated by an assessment" (p. 10) which suggests that evaluation is regarded as an activity accomplished through an assessment.

advice giver) "describes, recommends, or otherwise forwards a preferred course of future action" (Heritage & Sefi, 1992, p. 368) for another speaker (the advice recipient) to follow. As pointed out by Vehviläinen (2009) in a study of feedback in academic supervision encounters, educational advice is typically designed to deal with some problem of the performance or work of the recipient, that may be either indicated or implied. Hence, the delivery of advice assumes that an assessment has been made of the recipient's performance or work, performed either by the advice giver or the recipient him/herself. Assessments and advice can therefore be regarded as separate, but closely intertwined, components of feedback, the former focused on identifying strengths and weaknesses of ongoing or completed work or performance, and the latter on proposing solutions to the identified problems, or providing suggestions on how future work or performance can be improved.

Interactional studies of students' delivery of self- and peer-feedback in multiparty constellations have for example been carried out in the context of teacher training. In a series of studies, Copland (2010; 2011, 2012; see also, Copland, Ma & Mann, 2009) examines how feedback was delivered and received in post-teaching encounters for teacher trainees. The encounters involved a trainer and a group of trainees jointly discussing the trainees' teaching performance in preceding practice lessons. The trainees received feedback on their teaching from the trainer, and were invited to reflect upon and evaluate their own teaching practice, and to provide positive and negative feedback on the lessons taught by their fellow students. As indicated by the results of the studies, both self- and peer-directed feedback, despite being expected and requested elements of the encounters, were treated as interactionally problematic activities by the trainees. Positive self-assessments were produced reluctantly in brief, vague, and mitigated terms, which displayed an orientation by the trainees to positive self-talk as an interactionally delicate matter (Copland, 2010). Also, critical self-assessments were produced in brief terms, but they were still more detailed than the positive ones which suggests that self-deprecation was perceived as less delicate. This way of orienting to self-assessment is consistent with the norms of self-evaluation identified in other studies of mundane and institutional interactions (see, e.g., Pomerantz, 1978; Speer, 2011; 2012). An example is a study by Speer (2012) that based on data from a range of interactional settings, including telephone and face-to-face conversations, television shows, research interviews, and psychiatric assessment settings, examines in detail how positive self-assessments are organised in real-life situations. As demonstrated

by the study, speakers across mundane and institutional settings who assess their own appearances, achievements, attributes, and characters in positive terms design and deliver their assessments in a way that shows "reflexively that their practices are consistent with a norm against self-praise" (Speer, 2012, p. 57). For example, speakers regularly include disclaimers and qualifications in positive self-assessments to signal that their achievements or skills are contrary to what they expected (e.g., "I did a*ctually* think it looked the best") and thereby portray themselves as less self-satisfied and boastful (Speer, 2012).

Regarding the peer-feedback element of the feedback encounters investigated by Copland, many trainees found it to be an interactionally difficult task which was evident from the way in which it was produced. To a large extent, feedback directed to peer students was descriptive and focused on positive aspects of the teaching. Negative peer-feedback was largely avoided, and when it was given it was typically unelaborated, downgraded, and hedged. Moreover, trainees providing negative feedback to peers tended to comment on aspects that they themselves had performed poorly, thereby taking on some of the responsibility for the weaknesses (Copland, 2011). In the words of Copland (2010), the tensions related to the elements of self- and peer-evaluation could be regarded as a result of "an incompatibility between the participatory structures introduced in group feedback and trainees' understanding of what these participatory structures entail" (p. 472). As a possible way of reducing delicacy and tensions in such feedback meetings, Copland (2010) suggests that the feedback process, including "the phases, participatory structures, and discourse practices which trainers and trainees engage in and perform during feedback" (p. 471), should be clearly explained to all novice trainees before they take part in the meetings.

Similar observations as those reported by Copland regarding peer-feedback were made by Ekström (2013), also in the context of multiparty feedback conversations for student teachers. Students involved in a textile craft course had been assigned the task to assess and provide feedback on the embroidery work of peers while simultaneously receiving feedback on their assessments from a teacher. These exercises were intended to give the students an opportunity to practice assessment and provision of feedback on other's work, activities that were important elements of their future work as professional teachers. As demonstrated by the study, the students' positive feedback on the work of student peers was delivered in a direct format without hesitation or mitigation and produced with intensifiers (e.g., "really nice"), which suggests that it was

perceived as an interactionally unproblematic activity. Critical feedback, by contrast, was mitigated, and coupled with laughter and accounts for the critique: features that showed an orientation by the students to the critical feedback as an interactionally delicate activity. Moreover, the critique was formulated as personal, subjective opinions rather than objective observations: a format that displayed the students' lack of entitlement to claim superior competence and knowledge relative their student peers. The students' lack of epistemic authority was also evident from the way in which they repeatedly monitored the teacher during their delivery of feedback to check for confirmation on how they managed the task. As pointed out by Ekström (2013), assessing the work of others and determining what is appropriate feedback are difficult tasks for unexperienced novices and thus requires guidance and training.

> Assessing performances requires competence to recognize whether or not a specific performance corresponds to the projected actions. For students, this is often not possible to do; the ability to judge whether or not the current line of action corresponds to a correct or at least sufficient performance is extremely limited for a novice (p. 283).

Among the studies that investigate dyadic peer-feedback constellations in educational contexts, a majority focus on the practice of advice giving in contexts of peer-tutoring. Research on advice giving in other institutional settings, such as service encounters (Jefferson & Lee, 1981), calls to a radio advice line (Hutchby, 1995), and interactions between health visitors and first-time mothers (Heritage & Sefi, 1992), has shown that advising is likely to assume or establish an asymmetrical relationship between the advisor and advisee, which in turn often leads to delicacy and resistance regardless of whether advice is actively sought or unsolicited. Building on these findings, studies investigating peer-advising in educational contexts have largely focused on the interactional practices of advice delivery (e.g., Tsai & Kininger, 2014; Waring, 2007a; Waring, 2012) and recipiency (Park, 2014; 2017; Tsai, 2017; Waring, 2005; Waring, 2007b).

Concerning the delivery of advice, studies of other institutional settings have identified various strategies employed by advice givers to forestall and manage recipient resistance, such as tailoring the advice to the recipient instead of delivering a general piece of advice (e.g., Kinnell, 2002) or packaging the advice as something else than advice, for example information giving (e.g., Kinnell & Maynard, 1996). In a study of advising in peer-tutoring sessions at a graduate writing centre, Waring (2007a) identifies another method for dealing with such

issues, namely the use of accounts. The investigated tutoring sessions involved tutees, who were graduate students working on course papers, MA theses or doctoral dissertations, and tutors, who were either fellow graduate students or alumni students from the same school. The tutors provided pre-prepared comments on the tutees' manuscripts with the goal of helping to improve the quality of the manuscripts and to enhance the academic writing skills of the tutees. As pointed out by Waring (2012, p. 114), the peer-tutoring context differs from other advising contexts in some distinct ways. Compared to contexts where advice is unsolicited (see, e.g., Heritage & Sefi, 1992), the initiation of advice is typically less problematic in peer-tutoring where advice delivery is an expected element of the agenda. For example, the formulation of advice tends to be less prescriptive in peer-tutoring than in the interactions between health visitors and first-time mothers investigated by Heritage and Sefi (1992), probably due to that neither of the parties in the peer-tutoring context have obvious superior expertise and epistemic authority. However, like in other advising contexts, the asymmetrical relationship occasioned by the advising situation is likely to present interactional dilemmas (Waring, 2012). Waring (2007a) shows how the student tutors' use of accounts accomplished the interactional goals of coping with face concerns and managing recipient resistance, findings that in the words of Waring (2007a) contribute to broaden the understanding of "the intricate maneuvers involved in advice-giving" (p. 387). As a feature of the investigated advising sequences, Waring (2007a) defines accounts as "the reasoning (i.e. cause and effect) provided to bolster the viability of the advice" (p. 372). Two types of accounts were found: "problem-accounts" designed to ground the advice in a problem identified in the tutee's text, and "benefit-accounts" designed to highlight the benefits that could potentially be generated by the advice. As demonstrated by Waring (2007a), the sequential positioning of these two types of accounts in the advising sequences was crucial to what function they fulfilled. First-position accounts, that is, accounts produced prior to the advice, prompted the tutee to formulate the advice him/herself "as an 'upshot' of the account" (Waring, 2007a, p. 386) produced by the tutor, and thereby served a face-saving function and minimised resistance. Accounts placed in second-position served to forestall resistance by grounding the advice before it was questioned by the tutee. Third-position accounts either served to "neutralize the face-threatening act of advice giving by framing the advice not as a problem-fixer, but an alternative to be considered" (p. 386) or addressed the lack of clear displays of acceptance from the tutee. Finally, accounts positioned in fourth

position fulfilled the function of managing the tutor's own uncertainty or resistance.

The interactional practices of advice delivery are further addressed in another study by Waring (2012), also in the context of graduate peer-tutoring sessions. The study investigates tutor-initiated sequences targeted at the revision of problems with the tutee's writings, concentrating on the preference structures of the sequences. As observed by Waring (2012), there were two preferences driving the advising sequences: 1) a preference for grounding one's advice, and 2) a preference for tutee-initiated solutions. Regarding the first preference, the trajectory of the tutors identifying a problem before initiating advice delivery was the baseline for the advising sequences. In cases were the tutors skipped the problem identification and went directly to advice delivery, which according to Waring (2012) were due to attempts to downplay the problem or difficulties to articulate it, the absence of grounding was oriented to as problematic both by tutors and tutees. The second preference was salient in the sequences initiated with problem identification by the tutors. As found by Waring (2012), the problem identification was frequently followed by the tutors leaving space for tutee initiation, for example by asking criticism-implicative questions rather than launching into direct revisions, which resulted in that a mutually-attended to preference for tutee-generated solutions was manifested. In some cases, however, the interactional space offered by the tutors was not taken, that is, the tutees did not volunteer to propose solutions, which resulted in the tutors eventually articulating advice themselves as upshots of the prior talk. The findings of the study point to another feature that is distinctive to the peer-tutoring context: unlike in advising sessions between experts and novices where the expert is typically the one identifying problems and proposing solutions (e.g., Jacoby & Gonzales, 2002), peer tutor-identified problems are often followed by tutee-generated solutions.

Also, recipiency of advice has been examined in the context of peer-tutoring sessions. An example is a study by Waring (2005) that investigates how advice resisting was accomplished by the tutee in and through talk. As pointed out by Waring (2005), the relationship between the tutor and tutee is typically fluid and uncertain in such contexts since the two parties carry competing areas of expertise. In the tutoring sessions under study, for example, the student tutor was more knowledgeable about academic writing issues but not necessarily more, or even equally, knowledgeable about the specific subject matter of the student tutee's course paper, a constellation that gave rise to interactional dilemmas and

advice resistance. As demonstrated by the study, advice on content-related matters occasioned more resistance than advice on other issues (e.g., non-subject-specific writing issues). In resisting advice on the former kind of matters, the tutee employed three different practices: "assert own agenda", "invoke authority", and "doing being irrational". The first of these involved for the tutee to bring her own agenda to the fore and characterise it as unrelated to the nature of the advice (e.g., "I don't need to do X" or "I'm only doing Y"), thereby portraying the problem pointed to by the tutor as irrelevant. The second practice meant that the tutee invoked the voice of her course teacher/professor to back up the assertion that the tutor's advice did not address the specific needs of her situation (e.g., "let me give you Janine's tape. What she said. She wants me to do"). Finally, in "doing being irrational" the tutee provided "non-answer" answers in response to the tutor's advice-implicative questions (e.g., "they're there because they're there"), thus implying that the reason for including a particular piece of text was self-evident. As concluded by Waring (2005), the resistance may be explained by the tutee's identity claim and the knowledge asymmetries between the tutee and the tutor. In line with previous work (e.g., Vehviläinen, 2001) Waring (2005) suggests that the likelihood of resistance could be eliminated by the tutor eliciting the tutee's perspective prior to the delivery of advice, and by employing a stepwise entry to advise.

In line with Waring (2005), Park (2014) examines the interactional practices of advice resistance in the context of peer-tutoring sessions at a graduate writing centre, focusing on the phenomenon of stepwise resistance. This phenomenon involved the tutees deploying acceptance-plus-rejection turn shapes in responding to the tutors' advice, that is, to first provide acceptances/acknowledgements (e.g., "yeah", "right"), and then progressively move away from accepting the advice through contrastive conjunctions (e.g., "but") followed by epistemic statements (e.g., "I think/feel") combined with accounts for the resistance. The stepwise resistance occasioned reformulations of the advice by the tutors, typically coupled with specific reasons and concrete examples, which in turn led to acceptance by the tutees. A conclusion drawn by Park (2014) is that advice resistance does not necessarily result in conflicts or withdrawal but can lead to successful advice negotiation between the involved parties. However, in line with Waring (2005), Park (2014) emphasises that the intricate relationship between the tutor and tutee may require thorough interactional work "in establishing and maintaining the tutor's institutional role as an advice-giver at the given moment" (p. 376). The accomplishment of advice resistance is further

specified in another study by Park (2017) that focused specifically on how the tutees' advice-resisting questions featured in the advising sequences. Two specific practices of questioning that conveyed resistance were deployed by the tutees: 1) asking reversed polarity questions[19], and 2) asking questions proposing alternative candidate revisions. As was the case with the practice of stepwise advice resistance (Park, 2014), the tutees' deployment of such questions was found to be beneficial to the pedagogical work. The questions occasioned further explanations of the rationale behind the tutors' advice, or revisions of the advice based on the alternatives proposed by the tutees, which led to further discussion on the target issue and then advice acceptance by the tutees.

Interactional dilemmas notwithstanding, the delivery of advice is not always met with resistance in contexts of peer-advising, but the preferred alternative of advice acceptance frequently occurs. Waring (2007b) looks at how acceptance is accomplished, demonstrating it to be an interactionally complex process even though acceptance is the preferred response to advice. Unlike the way preferred responses are routinely delivered, that is "short and to the point" (Schegloff, 2007, p. 65; see also Chapter 3), the students' advice acceptances were elaborated and qualified the nature of the acceptance. Two practices of complex advice acceptance were identified: acceptances accompanied with claims of comparable thinking (e.g., "Yes. I thought the same thing"), and acceptances with accounts (e.g., "Okay. Yah. I saw it in somebody else's piece"). As observed by Waring (2007b), both were designed to assert the tutee's identify as a competent co-participant in the advising-process, and thereby served to "reconstitute the intrinsically asymmetrical event of consultation as a less asymmetrical one" (p. 117).

Teacher questions as mechanisms for guiding student contributions

As pointed out in Chapter 1 and 2, instructor questioning is a central feature of healthcare simulation debriefings to elicit self-reflection and self-assessment from learners, as well as to promote further, in-depth discussions on the issues topicalized by the learners' responses. The same applies to post-performance feedback meetings in other contexts of professional education, such as feedback encounters between mentors and student teachers (e.g., Copland, 2011;

[19] A reversed polarity question is a yes/no question that is treated by the recipient as making an assertion of the opposite polarity to that of the grammatical form of the question (Koshik, 2002).

Kim & Silver, 2014; Waring, 2014) which are also largely constituted by questions. Nonetheless, Waring (2014) noted that systematic inquiries into how learner self-reflection is pursued and produced in such encounters are rare. The following sub-section summarises two of the few existing interactional studies that address in detail how invitations for self-reflection and self-assessment are produced and received in post-performance feedback meetings. Thereafter, a selection of studies investigating how other types of eliciting questions by teachers/instructors feature in pedagogical interactions are discussed. Although these other types of eliciting questions are not asked with the intent to provoke learner self-reflection or self-assessment but aims for other kinds of responses, there are similarities between the questioning practices that make the latter practice relevant to the present thesis. For example, the ways in which learners orient to teacher/instructor questions as well as the ways in which teachers/instructors design their uptake of learner responses have proven to be recognisable across contexts.

Invitations for self-reflection

In the context of post-observation conferences for student teachers involved in a graduate TESOL (Teaching English to Speakers of Other Languages) program, Waring (2014) examines how self-reflection is fostered. As maintained by Waring (2014), self-reflection in this context, defined as "the open sharing of teacher perspectives on some aspect of their teaching" (p. 101), is largely dependent upon the mentors' ability to create a space that allows for such sharing. Based on video recorded post-observation meetings, Waring (2014) investigates how mentor invitations for student reflection on overall performance, learning and success, and issues and problems encountered in the practice lessons, were produced and received. As demonstrated by the analysed examples, the mentor invitations varied in both design and focus across three dimensions. First, there were invitations that addressed the student teachers' overall performance which were designed with different degrees of specificity ("general vs. specific"). Second, there were invitations for reflection upon learning or success designed to request answers either in the form of an analysis or an account ("analysis vs. account"). Third, there were invitations for reflections on particular problems encountered in the practice lessons that were either cause-attentive or solution-attentive in their design ("cause vs. solution").

For the first mentioned type of invitation, Waring (2014) found that a more specifically formulated mentor question received a better-fitted and more reflective answer from the student than a question formulated in general terms. As demonstrated by the analysis, the invitation of more general character ("how do you think that it went?") was treated as a test/display question by the student. According to Waring (2014), the student's response in the form of a non-specific "fairly well" followed by a report of a relatively trivial incident which the mentor was not privy to could be regarded as an attempt to escape the test, and sidestep the risk of producing a self-assessment that was incompatible with the mentor's assessment of the student's teaching performance. By contrast, a mentor question of a more specific character, prioritising the student's personal perspective and specifying the target of the assessment to events that both the mentor and the student had access to, received a more reflective and specific response from the student. For the second type of invitation, that is, invitations requesting analyses or accounts of learning or success, Waring (2014) observed that these opened up different participation opportunities for the students: while the former alternative successfully elicited a focused analysis from the student that matched the analysis made by the mentor, invitations requesting accounts were "instrumental in revealing some teacher experience or issue that would not have otherwise come to the fore" (pp. 111-112). As regards the third type of invitation, that is, invitations requesting reflections on what caused problems or on how problems could be solved, Waring (2014) found that the latter alternative was most productive in creating a space for student reflection.

The findings of the study by Waring (2014) disprove certain assumptions about how questions should be designed to effectively elicit reflection; while it has been argued that open-ended questions such as "How do you think the lesson went?" are mediational and conducive to reflection, the findings suggest that "open-endedness can be implemented at the expense of focus and efficacy" (p. 118). Moreover, the inherent asymmetry of the encounters was found to be a contributing cause to that open-ended mentor questions were treated by the students as test/display questions of a critical nature, an orientation that was found to be counterproductive for the purpose of eliciting reflection. To use the words of Waring (2014), for the practicing mentor/trainer/instructor "understanding the interactional consequences of question designs and the various dimensions of invitation may offer some leverage in making informed choices tailored to their specific mentoring situations" (p.118).

Like Waring (2014), Kim and Silver (2016) demonstrate how the design and sequential placement of mentors' eliciting questions are crucial to how successful they are in provoking teacher self-reflection in post-observation feedback conversations. The investigated conversations took place after teachers had been observed and video recorded while teaching lessons. The mentors and the teachers together watched the recordings of the lessons, and the mentors sought to encourage teacher self-reflection through discussions of instances in the recordings. In line with Waring (2014), Kim and Silver (2016) noticed that there tended to be "a delicate balance between provoking reflection (from the teacher) and providing a critique (to the teacher); between acknowledging teachers' expertise and professionalism and insisting on changes and innovations" (p. 203). As demonstrated by the study, how the teacher responded to the mentor's invitation for reflection was dependent on who initiated the discussion by stopping the video. In the words of Kim and Silver (2016):

> When the teacher initiated the episode by stopping the video, the mentor question served well to elicit what the teacher was thinking and facilitated oral reflection. However, when the mentor initiated the episode by stopping the video and inviting comments with a similar query, the teacher seemed perplexed, at best (p. 209).

A further observation was that the design of the mentor questions was of importance: regardless of who initiated the discussion, questions of a broad and open-ended character (e.g., "you wanna comment on something?") were frequently met with resistance, treated as test/display questions or a prelude to negative assessments, and generated little or no reflection from the teachers. By contrast, more specifically formulated questions framed with a recipient-centered perspective (e.g., "what are you noticing? or what are you thinking about?") more successfully provoked self-reflective responses by the teachers. As concluded by Kim and Silver (2016):

> [D]esigning a question in a way that focuses on what is in the teacher's mind rather than one which implies that the mentor has a specific point in mind seems to be an effective starting strategy that could lead to more open sharing, which, in turn, can allow oral reflection from the teacher to flow. (p. 212)

In summary, the studies by Waring (2014) and Kim and Silver (2016) suggest that the way in which a question aimed at eliciting reflective responses is designed is important, but not in itself decisive for how successful it is for this purpose. As demonstrated by the studies, the sequential environment of a

question as well as the relationship between the questioner and the addressee are also important in terms of how the question is perceived by the recipient. Waring's (2014) study emphasises that the mentors' superior status relative to the student teachers was a contributing reason to that the questions were understood as having known-in-advance or preferred answers rather than as questions requesting the perspective of the students. In addition to these observations, it can be mentioned that questions of the former type, that is, questions with known-in-advance answers, have proven to be a well-established feature of pedagogical interactions between experts/teachers/instructors and novices/students, something that may also have an impact on how questions asked in such contexts are approached by the recipients. A discussion on how such questions feature in pedagogical interactions is provided in the following subsection.

Pedagogical question-answer-sequences

As demonstrated by a growing body of ethnomethodological and conversation analytic work, as well as other educational research conducted over the past decades, teacher questioning is one of the most central organising resources of classroom instruction (e.g., Cazden, 2001; Gall, 1970). This is especially true for questions with known answers, also referred to as display/test/exam questions, and the sequence of Initiation-Reply-Evaluation/Feedback (IRE/F) that such questions produce (Lee, 2007; Macbeth, 2003). As outlined in Chapter 3, an IRE/IRF sequence is, in its simplest form, a three-part instructional sequence consisting of a teacher initiation (I) in first position, a student response in second position (R), and teacher evaluation/feedback (E/F) in third position. When the teacher's initiating action in first position receives the preferred student response or reaction in second position, the third position consists of a positive teacher evaluation/feedback that completes the sequence. If the reply called for does *not* appear in second position, by contrast, the sequence is typically extended until symmetry between the initiating action and the response has been established (Mehan, 1979a; Heap, 1985).

As mentioned in Chapter 3, Hugh Mehan's *Learning Lessons*: *Social Organisation in the Classroom* (1979a) was a seminal contribution to the study of pedagogical questioning in providing an early and detailed demonstration of how known-information questions and IRE sequences feature in early grade

classroom instruction. In the words of Macbeth (2003), whose work has contributed to further specify these phenomena, *Learning Lessons* is:

> substantially a study of how teachers ask questions whose answers they already know, how such questions initiate remarkably regular interactional sequences of instruction, and how students learn to become proficient at jointly producing them, bringing into alignment both the normative and substantive tasks that any next teacher's question may present to them. (p. 244)

After *Learning Lessons,* the organisation of teacher questioning has been subject to a substantial number of further interactionally oriented studies, carried out in the context of traditional teacher-fronted classroom instruction in primary or secondary school (e.g., Cazden, 2001; Heap, 1985; Margutti & Drew, 2014; Macbeth, 1994; 2000; Mehan, 1979b), and in higher education (e.g., Lee, 2006; 2007; Waring, 2008; 2009; Zemel & Koschmann, 2011). In summary, the findings of these studies show that the sequences generated by questions with known-answers can look different due to the design and focus of the initiating question and to the nature of the third-turn uptake by the teacher/instructor. The following sequence taken from Mehan (1979b, p. 285) provides an illustrative example of how a question aimed at performing a simple knowledge-test generates a (correct) response by the learner in second position, and a positive evaluation by the teacher in third position that terminates the sequence.

> Speaker A: What time is it, Denise?
> Speaker B: 2:30
> Speaker A: Very good, Denise

While question-answer sequences of this type may be primarily associated with early grade classrooms (see, e.g., Margutti & Drew, 2014), they also occur in higher education. As demonstrated by Waring (2008) in the context of English as a second language classrooms, successful displays of knowledge by the learners were regularly met with sequence-closing positive teacher evaluations (e.g., "very good", "excellent", "perfect"). While previous work, according to Waring (2008), has largely treated the terminal aspect of such explicit positive evaluations (EPAs) as "a given, normative aspect of classroom discourse" (p. 589), the study by Waring (2008) demonstrates the potentially problematic nature of such teacher responses.

> [B]y treating one learner's correct response as conclusive, exemplary, and beyond challenge, and by lavishing approval for the entire process that the

> learner has gone through to reach that response, EPA serves not only to cement the ending of a sequence but, more irrefutably, to preempt any further talk on the issue by implicating the latter as unnecessary or unwarranted. Neither the sequential nor the interactional aspect of EPA is particularly generous in providing the learners any space for questioning, exploring, or simply lingering on any specific pedagogical point at the time. In fact, its use can amount to suppressing the opportunities for voicing understanding or exploring alternative correct answers, both of which are the "stuff" that learning is made of. (p. 589)

Hence, an observation made by Waring (2008) is that explicit positive evaluations by teachers signal that "the case is closed" and that no further discussion on the learner's response is warranted, a termination that is claimed to be counterproductive to promote learning.

Another way in which known-answer questions feature in pedagogical interactions is as a means for guiding the students' line of reasoning in certain directions (e.g., Lee, 2006; Koshik, 2010; Zemel & Koschmann, 2011). For example, Koshik (2010) observed that teachers in one-to-one second-language writing conferences instead of correcting the students' errors used known-information questions "to provide the students with information that may enable them to correct their own errors either in their writing or their talk about their writing" (p. 164). Thus, rather than functioning as knowledge-checks, the known-information questions operated "as hints by targeting the problem and often suggesting a solution" (Koshik, 2010, p. 164). Similar observations are made by Zemel and Koschmann (2011) in a study of medical education seminars. This study focused on sequences in which the tutor after having posed a sequence-initiating query worked to extend and redesign the question in ways that made it possible for the students to collaboratively produce the correct answer instead of providing it him/herself. In the words of Zemel and Koschmann (2011):

> Getting students to think in particular ways may not occur if a teacher just presents a version of the reasoning process as a correction to student errors. Getting students to actually think in unfamiliar ways may require guidance and manipulation of the students' own reasoning as it is accomplished in situ. Questions provide a mechanism for doing just this (p. 486).

Likewise, a study by Lee (2006) in the context of English as a second language (ESL) university courses demonstrates that known-information questions have the potential to do more than entailing single IRE sequences with teacher feedback in third position that possibly initiates a next IRE sequence.

> Each next question in the series reveals how the teacher makes use of the contingent interactional context that the prior exchange of question and answer has generated. It is in this contingent work of common understanding and resultant interpretive actions that the students come to recognize what is called for and to offer their answers, which in turn, becomes a basis for the teacher's production of her next question in her third-turn position. (Lee, 2006, p. 701)

As demonstrated by Lee (2006), the third turn of the IRE sequence was frequently utilised by the teacher to ask a question that transformed the sequence-initiating question into a more specific one. This set up new parameters that moved the interaction forward by steering the discourse in a particular direction which eventually resulted in the students producing the correct answers.

To summarise, this chapter has presented a selection of previous ethnomethodological and conversation analytic work that addresses phenomena of interest to the thesis: how students reflect upon and give feedback on their own work/performance or that of their peers, and how teachers/instructors work to facilitate and guide students' reflection and reasoning through pedagogical questions. Although the chapter does not provide a complete and systematic review of work with this focus, it is possible to distinguish some major themes. As can be noted from the studies on self- and peer-directed feedback by students summarised in the first sub-section, the majority of this work focuses on dyadic constellations in which one student gives prepared comments on another student's written work. By contrast, encounters in which students reflect upon and evaluate their own performance and that of their peers in response to teacher/instructor elicitations have received less attention. As indicated by the studies discussed in Chapter 2, as well as the studies summarised in this present chapter (e.g., Copland, 2010; 2011; 2012; Kim & Silver, 2016; Waring 2014), teacher/instructor-guided self-reflection and self-evaluation are recurrent features of professional education and training such as simulation-based healthcare team training and teacher training. Yet, while a great deal of studies has explored how pedagogical questions feature in traditional classroom instruction and demonstrated their potential to elicit and guide learners' reasoning, work addressing the details of how reflection is pursued and produced in educational interactions is rare. The few studies that have paid close attention to these phenomena reveal that teacher/instructor invitations for reflection and feedback on students' own performance or that of their peers frequently lead to delicacy and interactional dilemmas. This points to a need for further

research that contributes to a deeper understanding of the interactional consequences of the design and sequential environment of such invitations.

5. Research setting and data production

All scientific methods derive from certain theoretical standpoints, assumptions, and presuppositions. The present thesis, like a growing body of research informed by ethnomethodology and conversation analysis, uses video recorded data as its empirical basis: a way of researching practice that often reflects an interest in the interplay between talk, visible conduct and/or material objects. In some video-based research, the central concern is with how texts, tools, and technologies feature in the accomplishment of certain activities, and for others the primary interest is in the relationship between speakers' talk, gaze, and gestures. In this thesis, a main reason for using video is to facilitate the identification of speakers. The debriefing conversations investigated in the empirical studies involve groups of up to twelve facilitators and students talking to each other, a conversational arrangement that would have been difficult to analyse with the help of audio recordings even though the emphasis is placed on spoken interaction. Moreover, as will be further described in Chapter 6 that details the analytical procedures, gaze and gestures by the participants sometimes reinforced or replaced conversational actions, for instance in the selection of next speaker, which would not have been possible to discern without video.

Video recorded data, like all forms of data, gives rise to a number of issues of methodological, ethical, and legal character that need to be addressed as part of the research process. The aim of this chapter is to present some of these issues and describe how they have been addressed in the work with the present thesis. The first section describes the empirical material on which the thesis is based in more detail and discusses some methodological considerations in relation to data usage. The chapter then continues to describe the settings under study, including the participating teachers/facilitators and students, ethical considerations, the preparations for and implementation of the video recording, and the procedures for the storage and archiving of recorded materials. The subsequent chapter (Chapter 6) describes the post-processing and analysis of the recorded data.

Empirical material

As mentioned in the introduction (Chapter 1), the research reported in this thesis was part of a larger research project entitled *Interprofessional learning in simulation-based training for the healthcare professions*. This project, which was financed by the Swedish Research Council in the years of 2013-2016, had as its overall purpose to explore how simulation-based learning environments could support the training of interprofessional collaboration and teamworking skills for healthcare students and professionals. Each of the three research teams that collaborated in the project video recorded simulation-based interprofessional training for healthcare students and/or professionals conducted at their research sites.

As a member of the University of Gothenburg team, I was involved in the recording of forty simulation training sessions conducted at the Gothenburg research site and was allowed to use these recordings as empirical material for the thesis. In addition, I had access to recordings of ten simulation sessions from each of the other two research sites that were part of the project's common pool of data[20]. Some of these simulation sessions involved training for professional physicians and nurses[21], and have therefore not been used as a basis for the thesis. In total, the simulation training data corpus analysed in the thesis comprises recordings of forty sessions for medical and nursing students from the Gothenburg site (data set 1) and eight from the Linköping site (data set 2). Information about the training sites, participants, and recording procedures is provided later in this chapter.

Although there are shared interests between the thesis and the larger research project, for instance, how tools and technologies in simulation-based learning environments can be used to support learning and reflection (see Study 1), the focus of the thesis is somewhat different. As pointed out in the introduction, the primary interest of the thesis is in how feedback activities in which students are actively involved, and instructional guidance of such activities, are organised in real-time practice. Although this interest is primarily explored in the context of simulation-based training, the relevance of the findings is not restricted to this setting but applicable to various educational settings in which similar feedback activities are carried out. This more general interest in feedback is reflected in the design of the third study of the thesis, which uses data from

[20] The research project created a common pool of data consisting of recordings of ten simulation sessions from each of the three research sites.

[21] All ten recordings from the KI research site and two recordings from the Linköping site involved training for professional physicians and nurses.

two different educational settings as its empirical basis[22]. In addition to recordings of simulation-based training (data set 1), Study 3 is based on recordings of nine teacher-student feedback encounters conducted at a Norwegian upper secondary school (data set 3).

The table presented below (Figure 1) provides an overview of the empirical material used as a basis for the three studies of the thesis.

	Study	**Data**	**Recording project**	**Recording time**
Data set 1	Study 1 Study 3	Recordings of forty simulation training sessions conducted at the Gothenburg site	Simulation research project, Gothenburg research team	October 2012 – May 2013
Data set 2	Study 2	Recordings of eight simulation training sessions conducted at the Linköping site	Simulation research project, Linköping research team	September – October 2013
Data set 3	Study 3	Recordings of nine feedback encounters conducted at a Norwegian upper secondary school	Norwegian master thesis project, master student	Autumn 2013

Figure 1. Overview of the empirical material used for the studies of the thesis.

As can be seen from the table, the studies are based on three data sets. Two of these were generated within the simulation research project: one for which I was involved in the recording process (data set 1) and one recorded by another research team within the project (data set 2). The third data set was not generated within the simulation research project, but this data was initially recorded for the purpose of a Norwegian master thesis[23]. Thereafter, the data was reused for additional studies, including the third study of this thesis[24].

Sharing and reusing data between projects has an extensive tradition within ethnomethodology and conversation analysis. Data corpora have been made available to the research community via open archives[25], and recorded materials

[22] Analysis and comparison of different data sets is discussed in Chapter 6 that describes the analytical procedures.
[23] Skjelberg, B. M. (2015). Hvordan synes du selv det gikk? En samtaleanalytisk tilnærming til vurderingssamtaler i norsk muntlig. Master's thesis. University College of Southeast Norway.
[24] Skovholt, the first author of Study 3, supervised the master thesis and received permission to reuse the data for additional studies.
[25] E.g, the CA TalkBank, https://ca.talkbank.org/access/.

have been shared within research groups and departments[26]. In recent years, funding agencies and governments internationally have worked to promote sharing and open access to research data to enhance transparency in research and maximise the return of science investments, which has led to increased re-use/secondary use of data within many research domains (Corti et al., 2014). As pointed out in the research literature (e.g., Corti et al., 2014; Wästerfors, Åkerström & Jacobsson, 2014), there are many good reasons for reusing existing data. For instance, it is cost-effective since it makes optimal use of already funded research and does not entail additional costs for new data collection; it reduces respondent burden; it enables further research on practices where it is expensive or difficult to collect data; and it facilitates comparison of data sets collected at different times or in different settings. However, as pointed out by Wästerfors et al. (2014), reusing data collected by other researchers can also involve certain challenges, one of which is the lack of first-hand information about "how, when, where or why the data were collected" (p. 475). Although detailed research documentation and personal communication with the researcher/s who collected the data can provide access to most methodological details, secondary information cannot fully replace the experience of having been present when the data was collected and thereby having access to the original context (Corti et al., 2014). Researchers who reuse existing data should therefore be transparent about the unavailability of methodological details and the original context in order to enable readers to judge for themselves whether the analysis is reliable (Wästerfors et al., 2014).

Since the thesis is partly based on data recorded by other researchers than myself (i.e. data set 2 and data set 3), it is relevant to address the methodological challenges discussed above. This will be done in the next section that describes the research setting and participants.

Research setting and participants

This section describes the physical settings in which the recorded training occasions were carried out, and provides information about the students and teachers/instructors who took part in the training. As mentioned in the previous section, I was involved in the recording of one of the three data sets used

[26] To provide an example, the "chicken dinner data", originally recorded by Charles Goodwin and Marjorie Harness Goodwin, has been reused in a number of CA studies (see, e.g., Heritage, 2012b; Schegloff, 1997; Lerner, 1993).

for the thesis: data set 1 recorded at the Gothenburg site which is described in the first sub-section. This description is thus based on my personal experiences. The sub-section that then follows presents the setting and participants at the Linköping site (data set 2). While I was not involved in the recording of the Linköping data, I visited the training site and had a close and continuous collaboration with the researchers handling the recording. I thus have good knowledge of methodological details for this data set, despite not being present during recording. The third data set (the Norwegian supervision encounters) is the one for which I have least knowledge about the original context. As mentioned earlier, this data was used as basis for Study 3 of the thesis, which was a cross-national collaboration with researchers affiliated with universities in Norway (Skovholt) and Great Britain (Stokoe). Skovholt, who was the first author of this study, contributed this data and I contributed a selection of the data generated within the simulation research project (see Figure 1). Both data sets were subject to collaborative analysis at a physical meeting during which we also exchanged relevant details about research settings, recording processes, and data management. For legal and ethical reasons, however, we did not provide each other with copies of the recordings, and only transcripts were shared.

Data set 1

At the Gothenburg site, the simulation training took place at a simulation centre located at a university hospital. The centre had two multifunctional simulation rooms that could be customised to function as emergency rooms, operating rooms, intensive care rooms or standard hospital ward rooms, depending on the training needs. The rooms were equipped with full-scale Laerdal SimMan[27] patient simulators, that is, human-size mannequins, that represented the patients in the simulation scenarios (see Figure 2). The simulators were computer-controlled and had advanced functions that enabled simulation of for instance speech, breathing, heart- and bowel sounds, pulses, and sweating. The rooms included standard medical and technical equipment such as patient monitors that displayed the patients' blood pressure and ECG.

[27] Laerdal SimMan 2G and Laerdal SimMan 3G.

Figure 2. A simulation room and a patient simulator at the Gothenburg site. Picture from the data.

During the simulation scenarios, the simulators were controlled by technical operators sitting in a control room located between the simulation rooms with one-way windows against each room (see Figure 3). The facilitators (i.e. the instructors) were also sitting in the control room during the scenarios, observing the students' actions and monitoring the equipment together with the operators. In case the students needed help or additional information, the facilitators talked to them via loudspeakers in the simulation room, or via an earpiece worn by one of the students.

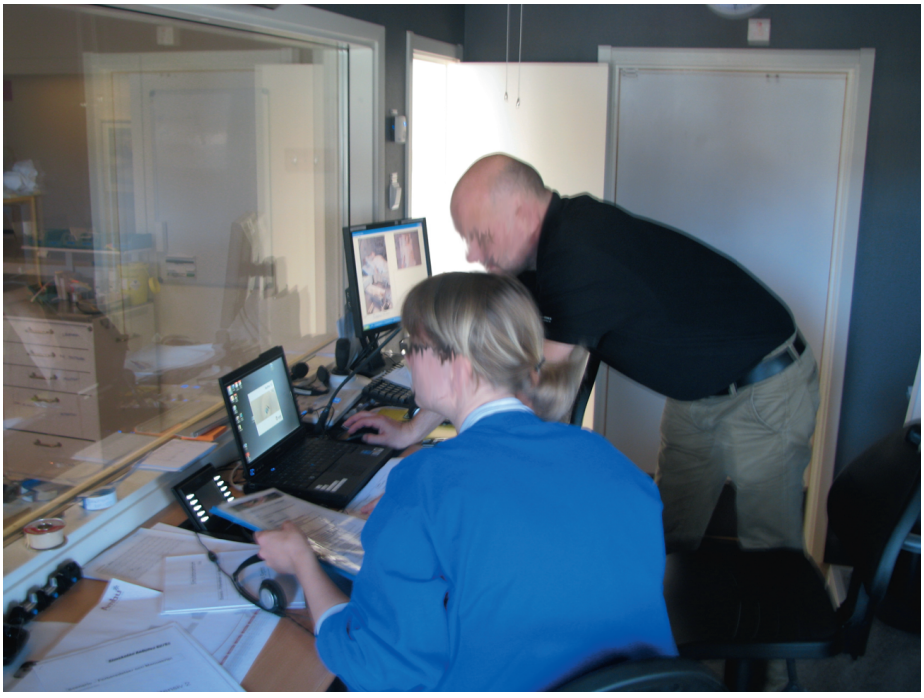

Figure 3. A technical operator and a facilitator monitoring a simulation scenario from the control room. Picture from the data.

At the Gothenburg simulation centre all simulation scenarios were video recorded for feedback purposes via video cameras and microphones mounted in the ceiling of each simulation room. Video streams from the three cameras and the image from the patient monitor were synced together in real-time by a computer application[28] generating a mixed-image video file (see Figure 4). When the scenario was finished, the facilitator selected a short sequence from the recording which was displayed and discussed in the debriefing conversation that took place directly after the scenario.

The forty simulation sessions that were recorded at the Gothenburg site were part of eight one-day training occasions on interprofessional collaboration for medical and nursing students (see Chapter 1 for an explanation of what "interprofessional" means). Each of the training days was organised in the same way. The day started with a lecture on principles for simulation-based training and some information on how the training was organised. The participating

[28] The Laerdal Advanced Video System (AVS) enables recording of the scenarios with up to four cameras.

students were then divided into two groups, who each received an introduction to the patient simulator and the equipment in the simulation rooms (simulator briefing). Following this, both groups conducted five simulation sessions each organised as a sequence of scenario briefing, simulation scenario, and debriefing. In the scenario briefing, the students received background information on the simulated patient case including, for instance, information about the patient's sex, age, and condition/injury/disease. The scenarios, that is, the simulated cases, were designed to enable training of interprofessional collaboration and teamworking skills with a special emphasis on a set of key principles: structured examination according to the ABCDE-sequence[29], reporting according to SBAR[30], speak-up, and closed-loop communication[31]. The scenarios were followed by debriefings, which can be described as facilitated follow-up conversations (see Chapter 2 for a more detailed description). The debriefings took place in a separate room (see Figure 4) and lasted approximately thirty to forty minutes.

[29] In the simulation training under study, the ABCDE sequence was used as support for the students to perform structured examinations of the patients, as well as for "summing-up reports". A – Airway, B – Breathing, C – Circulation, D – Disability, E – Environment and Exposure.

[30] SBAR is a model for communication that is used to ensure efficient transmission of information, for instance in handover reports. S – Situation, B – Background, A – Assessment, R – Recommendation.

[31] Speak-up and closed loop communication are techniques for effective communication included in the CRM concept. CRM, which stands for Crisis Resource Management, is a set of principles that are intended to help prevent difficulties and errors related to both individual and team behavior. Speak-up means that all team members must raise their voices and inform the other team members if they notice some issue/s that might be of importance for the patient's well-being. Closed loop communication means communication with feedback, that is, for the team members to confirm that they have heard and understood what other team members say.

Figure 4. A debriefing room at the Gothenburg site. On the video screen a mixed-image view of the simulation scenario is displayed. Picture from the data.

At the Gothenburg simulation centre, all facilitators used a pedagogical model for debriefing that served to support and maintain a certain structure for the conversation. The model, which was illustrated on a poster hanging on the wall of the debriefing room, included three main phases, *description*, *analysis,* and *application,* each specifying one to two questions (see Figure 5).

Beskrivning / Description

1. BLOW OUT: Vilken känsla sitter ni med just nu? /
   What feeling do you have right now?
   (Var det realistiskt? / Was it realistic?)
2. Vad hände? / What happened?

Analys / Analysis

3. Vad fungerade bra? / What worked well?
4. Vad skulle ni vilja göra annorlunda? /
   What would you like to do differently?
   (Konstruktiv feedback / Constructive feedback)

Användning / Application

5. Nämn en lärdom som ni tar med hem härifrån? /
   Mention a lesson you take home with you?

Figure 5. The debriefing model used at the Gothenburg site.

The students who participated in the training were medical students (semester 9 or 10 out of 11) and nursing students (semester 6 out of 6) in the final stages of their educational programs. For the nursing students, the simulation training was a mandatory element included in a course, whereas for the medical students it was a voluntary[32] element.

In total, 81 nursing students and 24 medical students took part in the eight training days, with an average of thirteen students participating in each training day. The students were divided into two mixed groups of one to two medical students and four to six nursing students. Each group conducted five simulation sessions including briefing, scenario, and debriefing. All group members could not partake in each simulation scenario, however, but one medical student and two or three nursing students performed the scenario while the other students in the group observed it via live video from the debriefing room. All students in the group took part in the debriefing that took place after the scenario.

The five facilitators who led the recorded training days were either medical doctors or nurses[33], and they all worked part-time at the simulator centre and the remaining time in clinical practice.

Data set 2

Like in Gothenburg, the simulation training was conducted in a specially equipped room that resembled a hospital ward room, and a human size patient simulator represented the patient (see Figure 6). Both the equipment and the organisation of the simulation sessions in many ways resembled those at the Gothenburg site and will therefore not be described in any further detail.

[32] At the time of the recording the simulation training was a voluntary element for the medical students while at the time of writing it was mandatory.

[33] One facilitator was a medical doctor and the other four were specialist nurses.

Figure 6. A simulation room and a patient simulator at the Linköping site. Picture from the data.

One major difference between the Gothenburg and Linköping sites concerns how the one-day training occasions were organised. The medical and nursing students who participated in the training at the Linköping site were divided into mixed groups that rotated between six different exercises. Only one of these exercises was a full-scale simulation exercise, and was therefore the only one that was video recorded for the purpose of the research project. Like in Gothenburg, the simulation exercise included three steps, briefing, scenario, and debriefing, carried out in different rooms. In Linköping, however, the scenarios were not video recorded for feedback purposes which meant that the observing students could not follow the scenario via video from the debriefing room. Instead, the students observed the scenario through a one-way window from the control room (see Figure 7).

Figure 7. Students, a facilitator and an operator observing and monitoring a simulation scenario from the control room at the Linköping site. Picture from the data.

The debriefings that took place after the scenarios were shorter than in Gothenburg (approximately ten to fifteen minutes in length), and not organised according to a predefined debriefing model. Further, since the scenarios were not recorded, the debriefings did not include video-based feedback.

Figure 8. A debriefing room at the Linköping site. Picture from the data.

A total of 58 nursing students and 23 medical students participated in the eight simulation sessions that were used as empirical material for the thesis. In Linköping, the simulation training was mandatory for both categories of students. The training was led by two facilitators, one medical doctor and one nurse, and one operator who was also a medical doctor.

Data set 3

The teacher-student feedback encounters were part of a Norwegian language course conducted at a Norwegian upper secondary school. The course participants were first year students at the age of sixteen years. As part of the course, the participating students performed oral presentations. The presentations were directly followed by one-to-one feedback encounters that lasted between nine and seventeen minutes. The encounters took place in a meeting room where the teacher and the students were seated at a table. The students received feedback on their presentations that was based on predefined assessment criteria. After the encounters, the students were expected to improve their presentations based on the feedback they received.

As stated earlier in the chapter, the recording of the feedback encounters was initially done for the purpose of a master thesis project. The project was approved by the Norwegian Centre for Research Data/Norsk Samfunnsvitenskapelig Datatjenste (NSD), and the teacher and students gave their written consent to participate in the research. A requirement from the NSD was that only the audio should be kept after the submission of the master thesis. Consequently, before the data was subject to further scrutiny, the sound was extracted from the video recordings and saved as audio files after which the video files were deleted. Transcription of the encounters was based on the video recordings, however, which means that the transcripts comprise non-verbal actions such as gaze and gestures.

Producing video data

The following sub-sections describe the preparations and implementation of the video recording undertaken in the simulation research project. As mentioned earlier in this chapter, the three research groups that collaborated in this project each recorded their own data. Since I was only involved in the recording of the Gothenburg data, some parts thus mainly apply to the production of this data. However, all research groups used similar procedures for handling the

ethical and practical issues during the recording process. These common procedures were developed in a pilot study conducted at the Gothenburg research site prior to the start of the larger project.

The Gothenburg data corpus was produced by me and a senior researcher, Hans Rystedt, who was also part of the Gothenburg research group. While both of us were involved in the preparations, I handled the recording and post-processing of the recorded data. In the remainder of this chapter, I will therefore use "we" when reporting on the preparations, and "I" when reporting on the remaining procedures. In total, eight simulation training days each including five simulation sessions were recorded at the Gothenburg site: four training days as part of the pilot study[34] in fall 2012, and four as part of the larger research project in spring 2013.

Preparing for video recording

Recording of video data requires a lot of preparation in terms of legal, ethical, and practical issues. The next two sub-sections describe the research project's joint procedures for applying for ethical approval and gaining access to the recording sites. The sub-sections that then follow report on how the Gothenburg research group dealt with information for training participants, retrieval of consent forms, and preparations of recording arrangements and equipment.

Applying for ethical approval

According to the Swedish Ethical Review Act[35], research on human subjects that involves retrieval and handling of sensitive personal data, or is likely to cause physical or psychological impact or in other ways harm the subjects, is required to undergo ethical review. Video recording of individuals counts as retrieval and handling of personal data since the recordings can be linked to and enable identification of these individuals. However, not all video recorded data is of sensitive nature, but this only applies to data that provides information on the recorded individuals' ethnic origins, political opinions, religious convictions or the like.

[34] I received permission to use the recordings generated in the pilot study for the thesis.

[35] The Swedish Ethical Review Act (SFS 2003:460) is available in Swedish on <http://riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/lag-2003460-om-%20etikprovning-av-forskning-som_sfs-2003-460>.

For the pilot study[36], an application for ethical review was sent to the central ethical review board in Gothenburg in spring 2012. The board stated that the project was not covered by the ethical review act, and ethical approval was therefore not required. The application for the larger research project was sent to the central ethical review board in Linköping[37], and it was approved in January 2013.

Gaining access to the recording site

To ensure that recording could be performed as planned at all three research sites, contacts with the simulation centres that arranged the training were established before the start of the research project. The simulation centres were located at university hospitals where research was conducted on a regular basis. Management and staff at the centres thus had great confidence in the importance of research as a means to develop and improve the practices. This, as well as the fact that the research project and the staff at the centres had shared interests in developing favourable conditions for supporting interprofessional learning in the simulation training, provided a good basis for collaboration at all three sites.

In addition to getting permission from the management at the simulation centres to undertake research, the research groups also needed to obtain permission from the instructors and training participants that were to be recorded. A common assumption is that it is difficult to get permission to video record individuals, but as maintained by Heath, Hindmarsh and Luff (2010) it is typically the research interests rather than the methods that are decisive. While video-based research concerned with individuals' "knowledge, reasoning and procedures on which they rely to accomplish their activities" (Heath et al., 2010, p. 17) is rarely considered as problematic, a focus on uncovering mistakes, errors, and failings of individuals might for obvious reasons be met with greater resistance. Hence, proper information about the aims and interests of the research, as well as what participation will involve, might be crucial for whether or not the requested individuals approve to be recorded.

Information to training participants and retrieval of consent forms

As stated by the Swedish Research Council (Vetenskapsrådet, 2017) information to prospective informants about video-based research shall clearly

[36] The University of Gothenburg was the research principal for the pilot study.
[37] The Linköping University was the research principal for the larger research project.

describe the purpose of the research; why it is necessary to use video instead of other forms of data (e.g., audio); what aspects of the video recordings the researchers intend to analyse; and, that participation in the research is voluntary. Further, since video recording of human subjects involves retrieval of personal data, the name of the data protection officer at the organisation responsible for undertaking the research shall also be made available. Finally, the informants shall be told whether the recordings will be edited in order to anonymise faces and/or voices; if copies will be made of the recordings, and if so, how many; if the recordings will be used for purposes other than research (e.g., education); that possible connections between the video recordings and other personal data will be encoded; how and where the recordings will be stored, and how long they will be kept. Preferably, this information shall be provided in both oral and written form, and followed by retrieval of the informants' written consent to participate in the research. By giving their written consent, the informants certify that they have been informed about the above-mentioned issues, and that they can withdraw their consent for the researchers to display, analyse, or in other ways use the video recordings, at any time.

As part of the pilot study, information sheets to instructors and training participants that addressed the issues mentioned above were prepared. In addition, it was stated that the overall interest of the research was in interprofessional learning in simulation-based training environments, and that analyses of the video recordings would focus on the training participants' joint rather than individual performance. This information was intended to make clear that those who agreed to be recorded would not run the risk of being portrayed unfavourably due to a focus on their individual achievements. For the retrieval of written consent from instructors and training participants[38], the information sheets included separate counterfoils with lines for name, signature, and date (see Appendix A-D).

In Gothenburg, information sheets were sent out in advance to training participants to offer them the opportunity to read through the information prior to the training occasions. In addition, time was allocated for the provision of oral and written information and the retrieval of written consents at the beginning of each training occasion. All instructors and students that were requested

[38] The consent only concerned video recording for the purpose of the research project. As mentioned in the section on the Gothenburg site, this simulation center video recorded all simulation scenarios for feedback purposes. These recordings were made independently of the research project.

to be video recorded for the purpose of the pilot study and the larger research project provided their written consent.

Recording arrangements and equipment

To facilitate the planning of practical arrangements and equipment for the recording, a visit to the Gothenburg simulation centre was undertaken prior to the first recording occasion of the pilot study. During this visit, we inspected the training facilities together with one of the instructors who was familiar with the routines and procedures for the simulation training. The purpose of this visit was to obtain an idea of what recording equipment would be needed, and where it could be placed to not interfere with the training.

Finding suitable positions for cameras and microphones can be a challenge, especially in small spaces. Positioning, focus, and the number of cameras and microphones all have an impact on the character of the recordings, and thereby also on what kind of analyses that are possible to perform (Heath et al., 2010). Moreover, for video recordings to be of high quality, a number of additional issues need to be taken into consideration, such as camera viewpoint, lighting conditions, and location of sound sources. These issues will be discussed below.

Each simulation session comprised three steps – briefing, scenario, and debriefing – that were carried out in two different rooms with short breaks in between. When space is limited, as was the case with the training rooms at the Gothenburg simulation centre, the video camera/s must be placed close to the recorded object/s which might result in a view too narrow to capture everything that is happening. If specific details of the recorded activity that are of interest to the researchers are clearly defined, recording of certain features of an activity might be enough (Derry et al., 2010). However, as the aim of the present research project was to generate data that was useful to researchers with different analytical interests, and allowed for exploration of a wide range of issues, it was necessary to capture all details of the simulation sessions. Since the training activities were carried out in two different rooms we anticipated that a dual set of recording equipment would be needed, each including one to two video cameras and at least one external microphone.

The room in which scenario briefings and debriefings were carried out was rather small, and largely occupied by a table and chairs. To capture the activities going on in this room in their entirety, we decided to use two HDV video

cameras[39] each equipped with a wide-angle lens and two external wireless microphones. The cameras were placed in opposite diagonal corners of the room, one recording the facilitator and the students sitting at one end of the table, and the other one recording the remaining students and the projector screen. When deciding on camera positions, we were careful to take lighting conditions into consideration, and thus not direct the cameras against windows or other strong light sources since this will likely result in poor image quality. Both cameras were to be placed on floor tripods that could be adjusted for height. A highly positioned camera is often preferable since this reduces the risk that the camera lens is blocked by people moving in front of the camera. Furthermore, a camera placed on a tripod gives a more stable image than a handheld camera, and it does not require a cameraperson holding it throughout the recording session.

The room where the simulation scenarios were carried out was designed to resemble an authentic hospital ward room, and equipped with standard medical supplies and devices. We anticipated that it would be possible to capture the essential parts of the scenarios with one video camera equipped with a wide-angle lens. The camera was to be placed in a fixed position and using a single viewpoint which would not require manoeuvring during recording. The latter was a prerequisite for obtaining permission to record the scenarios since the Gothenburg simulation centre had an established routine of only allowing training participants to be present in the simulation room during the scenarios.

The quality of the sound is often central to the usability of video recorded data. Modern video cameras have built-in microphones, but due to the rather poor quality of these they typically do not provide audio that is of satisfactory quality. Moreover, the camera is often located too far away from the recorded individuals to enable sufficient audio uptake via the built-in microphone. For this reason, we decided to use external wireless microphones that could be placed at different locations in the rooms.

During the visit at the simulation centre we took photos of the training rooms from multiple angles, which were then used as a basis for drawings on which planned positions of cameras and microphones were depicted (see Figure 9). These drawings were used as memo notes at the recording occasions to ensure that the placement of the recording equipment would be equivalent at each occasion.

[39] High Definition Video (HDV) is a digital video format that enables recording of high-resolution video on MiniDV-tapes.

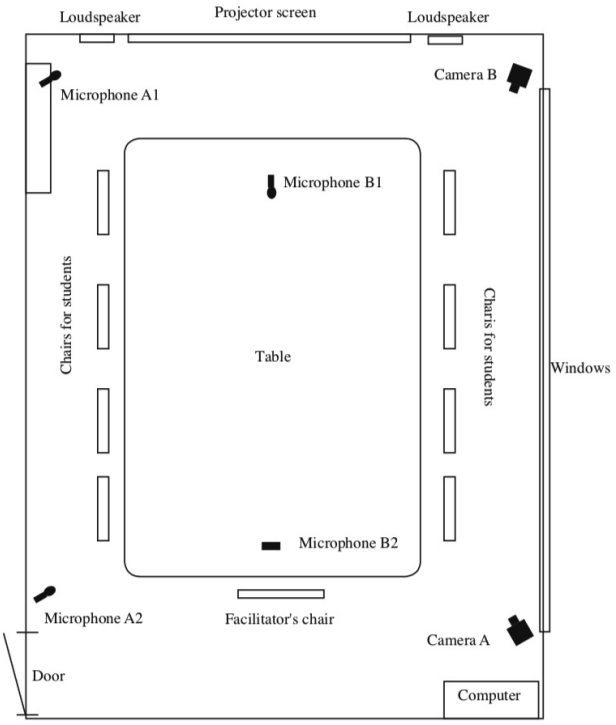

Figure 9. Drawing of the debriefing room showing the positions of cameras and microphones.

To make sure that the handling of equipment would run smoothly at the recording occasion, all equipment was carefully tested in advance. This included becoming proficient in how essential functions of the equipment worked, such as switching MiniDV-tapes, starting and stopping the recording, adjusting audio settings, image sharpness, and zooming. In addition, to estimate how much time would be needed for preparation prior to the start of the recording, we checked the procedures for folding up tripods and mount cameras, placing out and plugging in microphones, et cetera.

Recording video

The question of whether and how video recording influences the behaviour of the recorded individuals is frequently discussed (see, e.g., Heath et al., 2010, p. 44). A widespread assumption is that the presence of researchers and recording equipment will result in an "unnatural" behaviour. When considering this issue, the following statement by Goodwin (1981) is relevant:

> The issue of how participants deal with observation is in fact a subtle one. Within conversation, participants never behave as if they were unobserved; it is clear that they organize their behaviour in terms of the observation it will receive from their coparticipants. For example, a speaker does not simply "forget" a word; instead, he actively displays to the others present that he is searching for a word. Thus the issue is, not what participants do when they are unobserved, but whether the techniques they use to deal with observation by a camera are different from those used to deal with observation by coparticipants. (p. 44)

As pointed out by Goodwin, being under observation is not something that is unique for individuals who participate in video-based research, but it happens in *all* social situations. The question is thus not *whether* video recorded individuals are aware of being observed – because they certainly are – but rather if they, as a consequence of the presence of the researcher and the camera, do something that they would not normally do when being observed by others. A counter argument here could be that this is not possible to determine for a researcher who is not familiar with how the recorded individuals behave in other situations. As pointed out by Heath et al. (2010), however, a close examination of the recorded materials will help to reveal whether the individuals are oriented towards the camera/s or not.

At each recording occasion, I made sure to be in place well before the students arrived to have sufficient time for preparations. In addition to the time aspect, mounting the recording equipment in an empty room was preferable because it required some space and was thus easier to perform when the room was not crowded. Moreover, I anticipated that the students would pay less attention to the recording equipment if it was already in place when they arrived. After each recording occasion, I carefully reviewed the recordings in order to, using the words of Heath et al. (2010), "find evidence of the participants orienting to the filming and if instances [were] found then consider how they [arose] and why" (p. 48). I found some instances in the recordings where the students glanced at me or the cameras, but most of the time they attended to the ongoing simulation activities. Therefore, I concluded that the presence of the cameras did not affect the interaction to any great extent. Nevertheless, I constantly sought to avoid drawing unnecessary attention towards the recording, and tried to remain in the background and not interfere in the scene more than necessary.

Storage and archiving of recorded materials

As stated by the Swedish Research Council (Vetenskapsrådet, 2017), data that has been gathered in a research project as well as documentation of the research process belong to the public authority responsible for undertaking the research, and is thus covered by the Swedish Archives Act. While the research project is in progress the material shall be stored in a secure location where there is no risk that it is destroyed due to negligence or accessed by unauthorised persons. When the project is completed, the material shall be archived for continued preservation in accordance with the regulations that apply to the public authority to which the material belongs[40].

After each recording occasion at the Gothenburg site, the video files were transferred from the MiniDV-tapes on which they were recorded[41] to password-protected hard drives. The MiniDV-tapes and the hard drives with the original video files were kept in a locked data media safe to prevent unauthorised access, and protect them against potential damage caused by, for instance, fire or water leakage[42]. As the basis for the analytical work, copies were made of the original video files and stored on other password-protected external hard drives which, when not used, were also kept in the safe. The copies were converted to another file format to reduce file size and enable playing in media players. Also the consent forms and other written documentation generated during field work were kept in the safe. At a later stage, copies of all research material were archived at a protected server space with regular backup of the data.

What has been presented so far is the methodological, legal, and ethical issues related to the recording of the video data used as the basis for the thesis. In the next chapter, the procedures for post-processing and analysis of the recorded materials are described.

[40] In accordance with the guidelines from the universities participating in the research project it was decided that the recordings should be archived for at least 10 years.

[41] As mentioned in a previous section, we used HDV cameras that stored the recordings on miniDV-tapes. Although this type of camera was already outdated at the time of recording, we still chose to use them since the tapes when kept in a media safe constituted an affordable and safe backup.

[42] A data media safe is designed to give better protection against heat, smoke, and water than a regular safe.

6. Post-processing and analysis of video recorded data

Video recorded data offers a lot of benefits – such as the possibility to capture and preserve details of spoken and non-verbal interactions which enables for repeated reviews of these details – but it also poses a number of challenges for the analyst. For example, as pointed out by Knoblauch et al. (2006, p. 14), video recordings generate large amounts of data which confronts the researcher with the challenge of finding a balance between repeated and time-consuming reviews of the data corpus, selection of sequences for further scrutiny, and microanalysis of the selected sequences. This chapter describes how the analytical procedures were dealt with in the work with the thesis. The first three subsections present the procedures for cataloguing, reviewing, and transcription of the video data recorded within the simulation research project (data set 1 and 2). In the last sub-section, some methodological commitments that have informed the analyses of all three data sets are discussed. The analytical work with the thesis was far from linear, and included iterations and revisions of many procedures. For presentational purposes, however, the workflow is presented as ordered and stepwise in this chapter.

Cataloguing recordings

When working with video recorded data, Heath et al. (2010) recommend a preliminary review and a cataloguing of the entire data corpus as a first step of the analysis. This section describes these procedures for the simulation research data to which I had primary access: data set 1, which was recorded by the Gothenburg research team, and data set 2, which was recorded by the Linköping research team (see Figure 1 for an overview of the data sets).

At the Gothenburg site, recording was done at eight different occasions over a period of six months (October 2012 – May 2013). After each recording occasion, I transferred the video files from the MiniDV-tapes on which they were recorded to a hard drive. The files were named according to a system that was

jointly developed within the larger research project[43]. The file names provided information about the category of participants (students=S, professionals=P), recording research team (University of Gothenburg=GU, Linköping University=LIU, Karolinska Institute=KI), recording date (e.g., 22nd of April 2013=130422), type of activity (briefing=B, observation=O, scenario=S, debriefing=D), order of the activity (e.g., debriefing number three of the training day), and camera if more than one (A and B). Consequently, the recording of the first simulation scenario conducted in a training day for students at the Gothenburg site the 22th of April 2013 was named "S-GU-130422-S1". The recordings of the simulation sessions conducted at the Linköping site, which I received in fall 2013, were named according to the same system.

When the recordings were stored on hard drive, I completed a basic catalogue to obtain an overview of the data corpus. Figure 10 shows the catalogue of the recordings from one of the training days conducted at the Gothenburg site.

[43] A slightly different system was used for naming of the files recorded in the pilot study (these were recorded and transferred to hard drive before the start of the larger project).

Gothenburg site, 22th of April, 2013			
Activity	Room	Participants	Filename
Introductory lecture	Debriefing room 1	3 facilitators + all students in group A and B (n=13)	S-GU-130422-I
Briefing 1	Debriefing room 1	1 facilitator + all students in group A (n=7)	S-GU-130422-B1-O1
Observation 1	Debriefing room 1	Observing students in group A (n=4)	
Scenario 1	Scenario room 1	Performing students in group A (n=3)	S-GU-130422-S1
Debriefing 1	Debriefing room 1	1 facilitator + all students in group A (n=7)	S-GU-130422-D1A
			S-GU-130422-D1B
Briefing 2	Debriefing room 1	1 facilitator + all students in group A (n=6[44])	S-GU-130422-B2-O2
Observation 2	Debriefing room 1	Observing students in group A (n=3)	
Scenario 2	Scenario room 1	Performing students in group A (n=3)	S-GU-130422-S2
Debriefing 2	Debriefing room 1	1 facilitator + all students in group A (n=6)	S-GU-130422-D2A
			S-GU-130422-D2B
Briefing 3	Debriefing room 1	1 facilitator + all students in group A (n=6)	S-GU-130422-B3-O3
Observation 3	Debriefing room 1	Observing students in group A (n=3)	
Scenario 3	Scenario room 1	Performing students in group A (n=3)	S-GU-130422-S3
Debriefing 3	Debriefing room 1	1 facilitator + all students in group A (n=6)	S-GU-130422-D3A
			S-GU-130422-D3B
Briefing 4	Debriefing room 1	1 facilitator + all students in group B (n=7)	S-GU-130422-B4-O4
Observation 4	Debriefing room 1	Observing students in group B (n=4)	
Scenario 4	Scenario room 1	Performing students in group B (n=3)	S-GU-130422-S4
Debriefing 4	Debriefing room 1	1 facilitator + all students in group B (n=7)	S-GU-130422-D4A
			S-GU-130422-D4B
Briefing 5	Debriefing room 1	1 facilitator + all students in group B (n=7)	S-GU-130422-B5-O5
Observation 5	Debriefing room 1	Observing students in group B (n=4)	

Scenario 5	Scenario room 1	Performing students in group B (n=3)	S-GU-130422-S5
Debriefing 5	Debriefing room 1	1 facilitator + all students in group B (n=7)	S-GU-130422-D5A
			S-GU-130422-D5B

Figure 10. A basic catalogue of video files recorded at one of the training days conducted at the Gothenburg site.

As pointed out earlier, the thesis does not investigate all steps of the simulation training, but focuses on the debriefing conversations[45]. Consequently, only the recordings of the debriefings were used as the basis for analysis, while the recordings of the remaining steps of the simulation sessions were used as background materials to get an overall view of how the training was organised. The table presented below (Figure 11) provides an overview of the recordings of all forty-eight debriefing conversations. The total length of these recordings is approximately twenty-two hours[46].

[44] One of the medical students was moved to group B after the first simulation session.

[45] According to the research plan of the larger project, the Gothenburg team should focus on the debriefings, the Karolinska Institute team on the briefings, and the Linköping team on the scenarios. Consequently, it was decided in advance that the thesis should investigate the debriefing conversations.

[46] The total length of the recorded debriefings is calculated on the basis of one video file per recording occasion.

Phase	Recording site and year/date	File name
Pilot study	Gothenburg, 16st of October 2012	SIM121016-debrief1A, SIM121016-debrief1B
		SIM121016-debrief2A, SIM121016-debrief2B
		SIM121016-debrief3A, SIM121016-debrief3B
		SIM121016-debrief4A, SIM121016-debrief4B
		SIM121016-debrief5A, SIM121016-debrief5B
	Gothenburg, 17th of October 2012	SIM121017-debrief1A, SIM121017-debrief1B
		SIM121017-debrief2A, SIM121017-debrief2B
		SIM121017-debrief3A, SIM121017-debrief3B
		SIM121017-debrief4A, SIM121017-debrief4B
		SIM121017-debrief5A, SIM121017-debrief5B
	Gothenburg, 19th of November 2012	SIM121119-debrief1A, SIM121119-debrief1B
		SIM121119-debrief2A, SIM121119-debrief2B
		SIM121119-debrief3A, SIM121119-debrief3B
		SIM121119-debrief4A, SIM121119-debrief4B
		SIM121119-debrief5A, SIM121119-debrief5B
	Gothenburg, 20th of November 2012	SIM121120-debrief1A, SIM121120-debrief1B
		SIM121120-debrief2A, SIM121120-debrief2B
		SIM121120-debrief3A, SIM121120-debrief3B
		SIM121120-debrief4A, SIM121120-debrief4B
		SIM121120-debrief5A, SIM121120-debrief5B
Research project	Gothenburg, 7th of March 2013	S-GU-130307-1A, S-GU-130307-1B
		S-GU-130307-2A, S-GU-130307-2B
		S-GU-130307-3A, S-GU-130307-3B
		S-GU-130307-4A, S-GU-130307-4B
		S-GU-130307-5A, S-GU-130307-5B
	Gothenburg, 8th of March 2013	S-GU-130308-1A, S-GU-130308-1B
		S-GU-130308-2A, S-GU-130308-2B
		S-GU-130308-3A, S-GU-130308-3B
		S-GU-130308-4A, S-GU-130308-4B
		S-GU-130308-5A, S-GU-130308-5B
	Gothenburg, 22nd of April 2013	S-GU-130422-1A, S-GU-130422-1B
		S-GU-130422-2A, S-GU-130422-2B
		S-GU-130422-3A, S-GU-130422-3B
		S-GU-130422-4A, S-GU-130422-4B
		S-GU-130422-5A, S-GU-130422-5B
	Gothenburg, 22nd of May 2013[47]	S-GU-130522-1A
		S-GU-130522-2A

		S-GU-130522-3A
		S-GU-130522-4A
		S-GU-130522-5A
	Linköping, 19th of September 2013	S-LIU-130919-D1
		S-LIU-130919-D2
		S-LIU-130919-D3
		S-LIU-130919-D4
	Linköping, 31st of October 2013	S-LIU-131031-D1
		S-LIU-131031-D2
		S-LIU-131031-D3
		S-LIU-131031-D4
		n = 48

Figure 11. Overview of the recordings of the debriefing conversations.

Reviewing data

After the preliminary review and cataloguing of the data, I went on with more substantive and focused reviews in order to find phenomena for investigation (Heath et al., 2010). When starting the analytical work, I had no clear research questions in mind but adopted what is sometimes called a whole-to-part inductive approach (e.g., Derry et al., 2010). I started with reviewing the entire data corpus and then progressively concentrated on the parts that caught my interest. Although I had handled the recording at the Gothenburg site and thus seen the debriefing conversations play out "in reality", reviewing the recordings gave rise to new insights. For example, it became very clear that all debriefings at the Gothenburg site followed a similar structure that largely corresponded with the steps of the predefined debriefing model used at the Gothenburg simulation centre (see Figure 5). The recordings revealed that all facilitators strictly adhered to the stepwise structure of the model, and used it as an agenda for the debriefing conversations. In the beginning of the first debriefing of each training day, the facilitators explained the structure of the model to the students (Figure 12).

[47] At the recording occasion 22th of May 2013 one of the video cameras broke and these debriefings were therefore recorded with only one camera.

Figure 12. The facilitator who leads the debriefing explains the stepwise structure of the debriefing model, pointing to the poster on which the model is illustrated. Picture from the recording SIM121017-debrief1B.

After the initial presentation of the model, the facilitators went on to address each of the questions in the order they were listed. The students who had taken part in the preceding scenario were usually invited to respond first, and then those who had observed. In conjunction with the addressing of the third question of the model ("what worked well?"), the facilitators showed short sequences from the video recordings of the preceding simulation scenarios and then invited the students to comment on the displayed situations (Figure 13). The latter step was not specified in the debriefing model, but constituted a supplementary element.

Figure 13. The facilitator and the students watch a video clip showing a situation from the preceding simulation scenario. Left image: facilitators and students watching the clip, picture from the recording with camera B. Right image: the mixed-image video recording displayed on the projector screen, picture from the recording with camera A.

Figure 14 shows a time-marked event log created during the review of one of the recorded debriefing conversations (SIM121017-1B). The log lists the start and end of the conversation, the addressing of each question specified by the debriefing model, and brief notes on activities/phenomena that I found interesting at the time of reviewing the recording. Similar logs were created for the remaining recorded conversations. Some of these logs listed events that were not directly linked to the steps of the debriefing model, for example, the participants' topicalization of healthcare communication models (e.g., the SBAR-structure and the ABCDE-sequence). Although the logs did not include all features of the conversations, they were useful when I later searched for particular instances of interest.

SIM121017-debrief1B		
Time	Event	Notes
00:03:28	Start	
00:03:32	Facilitator explains the debriefing model to the students	Pointing gesture towards the poster on which the model is illustrated.
00:05:30	Facilitator addresses the first question "what feeling do you have right now?"	Oral question formulation similar to the written formulation specified in the model. The three students who took part in the scenario respond, two nursing students (NU1 and NU3) and one medical student (MED).
00:05:59	Facilitator addresses the second question of the model "what happened?".	Directs the question to the two nursing students who took part in the scenario, then to the medical student.
00:12:09	Facilitator addresses the third question of the model "what worked well?"	Oral formulation different from written formulation. Directs the question to the group. NU3 self-selects to respond. NU1 joins in. Students resist the terms of the question by bringing up an aspect that did not work well. Facilitator responds with corrective uptake that attempts to resume the agenda. Students continue to respond in line with the question terms.
00:17:36	Facilitator introduces video clip	Semi-specific introduction of the displayed situation.
00:18:24	Video start	
00:19:14	Video stop	
00:19:32	Facilitator invites for positive assessments of the situation shown on video	Question formulated in terms of seeing. Medical student responds, comments on the performance of a nursing student (NU3).
00:21:58	Facilitator addresses fourth question of the model "what would you like to do differently?"	Directs the question to the group. Nursing student (NU3) self-selects to respond.
00:30:59	End	

Figure 14. Event log listing key events of a Gothenburg debriefing conversation.

At the Linköping site, the facilitators did not use a predefined model specifying what questions to address and in what order, but applied what is sometimes called a "laissez-faire approach" (see Chapter 2). Nonetheless, detailed reviews of the eight recorded debriefings analysed in the thesis revealed that the conversations followed a recognisable structure. For example, I noticed that the

initiating question posed by one of the facilitators was formulated in a similar way in all eight conversations (see Figure 15): something that is subject to further discussion in Chapter 8 of the thesis.

Recording	**Initiating question by the facilitator**[48] (simplified and translated from Swedish)
S-LIU-130919-D1	You're welcome to speak openly and from the heart.
S-LIU-130919-D2	More spontaneous comments? Speak from the heart to begin with.
S-LIU-130919-D3	Openly from the heart. Spontaneous comments to begin with.
S-LIU-130919-D4	You're welcome to speak freely. What do you want to say more, spontaneously? Everyone? Actors as well as observers.
S-LIU-131031-D1	Speak openly. Comments from everyone, actors as well as observers.
S-LIU-131031-D2	You're welcome to speak freely. Spontaneous comments, anything and anyone.
S-LIU-131031-D3	More spontaneously? Speak openly and from the heart, anyone.
S-LIU-131031-D4	Speak freely. Spontaneous comments, more, and everyone.

Figure 15. Log of initiating questions in the Linköping debriefings.

Finding phenomena for investigation

The review and logging of key events in the recorded debriefings provided a good basis for the next step, finding phenomena for investigation in the empirical studies. When I started to work with the thesis in spring 2013 I only had access to the Gothenburg data (data set 1) and it was thus this data that was examined first. As can be seen in the event log presented in Figure 14, several activities caught my interest when I first reviewed the recordings of the Gothenburg debriefings. One of these was the displaying and discussion of video clips of the students' simulation performance. Already during my first visit to the Gothenburg simulation centre, I noticed that the discussions that followed after the video clips were different from the remaining parts of the conversations. While the discussions were otherwise based on the facilitators' and students'

[48] To enhance readability, the facilitators' invitations in Figure 15 are presented in simplified English rather than literal translations from Swedish. For example, a literal translation of the Swedish "varav hjärtat är fullt därav talar munnen" (i.e. "of which the heart is full thereof the mouth speaks") is somewhat problematic. Therefore, for ease of readability it has been translated to "speak openly and from the heart".

recollected experiences of the simulation scenarios, the video provided an additional perspective which enabled for discussions on audio-visual aspects of the students' performance as well as contrasts between first-hand experiences and visual appearances of the displayed situations. Fragment (2) presented below provides an example of how a nursing student (NU3), after having seen a situation from the preceding simulation scenario displayed on video, contrasts his perceived feeling of worry with the visual appearance of his own conduct.

Fragment (2) (simplified and translated from Swedish)

```
[SIM121016-debrief1A 00:20:21 – 00:20:27]
NU3:   I felt somehow more worried than what I like appear to be here
NU3:                              ((gestures towards the video screen))
```

Figure 16. A nursing student (NU3) comments on his own performance after having seen a video clip. Picture from the recording with camera A.

In accordance with the guidelines in the research literature (e.g., Heath et al., 2010; Sidnell, 2010), I gathered all instances of the video-discussion activity from the recorded debriefings (n=37[49]). These instances formed a candidate collection for the first study of the thesis (Study 1).

In a next step, I went through the collection of candidate instances to identify a more specific phenomenon for investigation. As pointed out by Schegloff (2007), a common tendency when examining talk-in-interaction is to think of its organisation as topical, that is, that turns hang together "because they are somehow 'about' the same thing" (p. 1). This was also how I initially

[49] In three of the forty video recorded debriefings, no video clip was displayed due to technical problems.

approached the data, and thus regarded the video-discussion activity as characterised by the participants talk about the video clips. However, as emphasised by Schegloff (2007), conversation analysis is concerned with what talk-in-interaction is *doing* rather than what it is *about*:

> Whatever may be the case about topics and topicality, it is important to register that a great deal of talk-in-interaction – perhaps most of it – is better examined with respect to *action* than with respect to *topicality*, more for what it is *doing* than for what it is *about*. (p. 1, emphasis in original)

Repeated reviews and preliminary analyses of a selection of the gathered instances, performed in collaboration with my supervisors and co-authors Lindwall and Rystedt, helped revealing that each of the instances included a number of different actions and activities, for example, pedagogical questioning, speaker selection, non-verbal referencing, repair, correction, self- and other-assessment, et cetera. Only a couple of these activities became subject to in-depth investigation in the study: facilitator questions specifically inviting for assessments of audio-visual aspects of the students' simulation performance shown on video, and student responses providing such assessments.

The preparatory work for Study 2 and 3 was done in a similar way, that is, after having identified an interesting phenomenon/activity I went on to gather candidate collections, undertake detailed reviews of the instances, make preliminary analytical observations, and then gradually concentrate on specific sequences of action. For Study 2, to which I am the single author, these steps were undertaken with guidance from my supervisors. For Study 3[50], the work was performed in close collaboration with the other two authors, Skovholt and Stokoe. The table below (Figure 17) shows an overview of the phenomena of investigation and data of the three studies of the thesis.

[50] Study 3 was initiated by Skovholt who noticed a similar activity in the simulation debriefings and the feedback encounters: in both contexts, the teachers invited the students to assess their own educational performance through eliciting questions. I presented the debriefing data in a PhD course led by Skovholt and Stokoe at the University of South-Eastern Norway in spring 2016. We started the collaborative work with the study the following year.

	Study 1	**Study 2**	**Study 3**
Investigated phenomena/ activities	Instructional questions inviting for assessments of the students' simulation performance shown on video, and student responses providing such assessments	Peer-directed feedback by students and instructor uptake of this feedback	Teacher/instructor-questions inviting for self-assessments by students, and student responses to these questions
Data	Data set 1	Data set 2	10 recordings from data set 1 + data set 3

Figure 17. Overview of empirical studies.

In addition to the guidance received from supervisors and co-authors, input from other scholarly colleagues provided valuable support in the initial stages of my analytical work. A recommendation in the literature on qualitative video-based research (e.g., Derry et al., 2010; Heath et al., 2010; Sidnell, 2010) is to present video data in joint data sessions to get help to identify phenomena worthy of further investigation and develop analytical insights. At my department, monthly data sessions were arranged by the *Network for the Analysis of Interaction and Learning (NAIL)*. The purpose of these sessions was to perform collaborative analyses of video data, primarily in the spirit of ethnomethodology and conversation analysis. During the years that I worked on the thesis I participated regularly in these sessions, both to present my own data and to contribute to the analysis of other researchers' data. I also presented data at international conferences, workshops, courses, and joint meetings within the larger research project, something that provided me with alternative perspectives and contributed to many new insights.

The analytical work that resulted in the empirical studies is further delineated in the next two sections. First, the procedures for transcription are described, and second, some key analytical commitments that guided my analyses are discussed.

Transcription

Transcription is a necessary step of the analytic procedure when investigating talk-in-interaction. Usually, transcription involves many iterations to capture the exact wording and fine details of the recorded interactions. It is thus a time-consuming process, especially when many speakers are involved in the

transcribed conversation. As estimated by Heath et al. (2010, p. 32), a plain transcription of one hour of video data takes a minimum of three to five hours to perform, depending on the audio quality, the number of speakers involved, and the amount of overlapping speech et cetera. However, the analytical value of the transcription procedure undoubtedly makes it worth the time and effort. As asserted by Heath et al. (2010, p. 67), transcription is not just a way of *representing* audio-visual data, but should be regarded as an important step of the analytic work as it provides an opportunity for the analyst to develop observations and discover interesting features of the data. Or, to use the words of Knoblauch et al. (2006):

> [T]ranscribing data is not just a preliminary phase of analysis. It forms an essential part of analysis. Transcribing generates observations that are fundamental to analytical inferences. As in research based on natural communicative activities or interviews, the transcription of video data is simply indispensable. (p. 16)

For data set 1, I transcribed one debriefing from each training day from beginning to end to get a detailed overview of how all phases of the conversations were organised (e.g., openings, closings, topic initiations, and transitions et cetera). The remaining conversations were transcribed to varying degrees. I made event logs of the kind presented in Figure 14, and transcribed those parts that I had analytical interest in. The Linköping data corpus (data set 2) was transcribed in its entirety since the total length of these recordings was only about one and a half hours. These transcripts were plain versions, however, that only represented *what* was said by the participants. Detailed transcription of *how* utterances are said, that is, with pauses, intonations, overlaps, and non-verbal actions (ten Have, 2007), is much more time-consuming to perform and were therefore only produced for the sequences that were selected for closer investigation in the studies.

The more detailed transcripts were based on a system that was originally developed by Gail Jefferson (for descriptions of this system, see Atkinson & Heritage, 1984, p. ix-xvi; Jefferson, 2004). Already more than thirty years ago, Atkinson and Heritage (1984) emphasised that this system was evolving in response to more current research interests. The system that I used is thus to be regarded as a modified version of Jefferson's original one. Below, explanations of the transcript conventions used in the studies of the thesis are presented.

[word]	Syllables or word/s within brackets are overlapping with another speaker's talk (also within brackets)
=	Shows that two utterances are latched, i.e. there is no pause between the utterances
(.)	Micropause, shorter than 0.2 seconds
(1.4)	Length in absolute seconds of gap or pause longer than 0.2 seconds between words or turns
Word	Underlining indicates emphasis (here of the first two syllables of the word)
Wo::rd	Colon/s indicates prolonged vowel or consonant
↑↓Word	Shift in pitch, (↑)up or (↓)down
Word.	Final falling intonation
,	Final slightly rising intonation
_	Final flat intonation
?	Final sharp rising intonation
WORD	Word/s in capitals is pronounced louder than surrounding speech by the same speaker
°word°	Word/s within degree signs is pronounced distinctly quieter than surrounding speech by the same speaker
£word£	Word/s within pound signs is pronounced with smiley voice or suppressed laughter
word-	Talk is cut-off
w(h)ord	(h) indicates embedded laughter particles
.hhh	In-breath of "normal" duration. Fewer or more h's indicate shorter or longer in-breath
(PRT)	Particle (e.g., the Swedish "ju") for which there is no English counterpart
(word)	Indicates that the transcriber is uncertain of the word. Empty brackets or xxx within the brackets represent inaudible speech.
((text))	Italicised text within double brackets is the transcriber's description of gaze or bodily actions conducted while the utterance on the line above is produced

Whereas there are several established transcription systems for transforming "the analytically important aspects of spoken language into textual representations" (Knoblauch et al., 2006, p. 16), systems for transcription of visual conduct are still under development (Knoblauch et al., 2006; Heath et al., 2010).

However, there are conventions developed by well-known researchers in the field of video-based interaction studies (e.g., Lorenza Mondada) that are relatively widespread and used in a number of studies analysing multimodal interactions (see, e.g., Mondada, 2018).

In the studies that are part of this thesis the emphasis is put on verbal interactions. However, in those cases where I found that gazes, gestures or bodily actions complemented the speech in some significant ways, these were represented in the transcripts. For transcription of non-verbal conduct, I used a widespread and basic system which involves inserting a brief description in italicised text, within double brackets, on a separate row below the transcribed talk (see the list of conventions presented above). An example is Extract 8 in Study 3 where the facilitator's gaze rather than verbal formulation showed who was the intended addressee of her question. In Fragment (3) presented below, a cut-out from the extract is presented to illustrate this transcription system.

Fragment (3), from Skovholt, Nordenström and Stokoe (2019, p. 53)

```
01   FAC:   E de nånting du skulle ha gjort annorlunda.
            Is there something you should have done differently.
     FAC: →((gazes at NU4))
```

An advantage of this system is that it is easier for readers to interpret than a great deal of other and more complex systems for transcription of non-verbal conduct. A clear disadvantage, however, is that it does not show the exact relationship between the speakers' talk and non-verbal conduct. In the fragment presented above, for instance, it is not possible to see at what syllable the facilitator shifts her gaze towards the nursing student (NU4), or for how long she keeps her gaze directed at the student. In some cases, such level of detail is necessary for the researcher (and readers) to be able to develop analytic insights on the interplay between verbal and non-verbal conduct. For my analytical purposes, however, the exact timing of the speakers' gazes and gestures in relation to their talk was not that important. For example, to take Study 3 from which Fragment (3) is obtained, non-verbal techniques for next speaker selection was not the primary phenomenon of investigation and instead the focus was put on verbal interactions. To be able to follow the analytical argumentation in the study, readers need to know *that* the facilitator uses gaze-directional addressing (Lerner, 2003), but not the exact timing of this action.

As emphasised by ten Have (2002) researchers working with analysis of audio-visual data should keep in mind that transcripts are not *the data*, but *representations of certain features* of the data. The following schema is used by ten Have (2002, p. 3, emphasis in original) to demonstrate how transcription features in the process of recording and analysing audio-visual data:

Original (inter-)action -> *recording* -> (audio/video)record -> *transcription* -> transcript -> (action) *understanding* -> procedural *analysis* -> analytical argument

The schema aims to show that there are several stages in this process, transcription included, that are "selectively reductive vis à vis the preceding states/products" (ten Have, 2002, p. 3). Simply put, this means that transcription of a recording to greater or lesser extent causes loss of details and nuances that are available in the original recording – which in itself can be regarded as reductive vis à vis the recorded interaction. Thus, as emphasised by ten Have (2002), transcripts should not be used as substitutes for the recordings during the analytic work, but rather as complements. Hence, when analysing the data, I used the recordings and transcripts in parallel to avoid loss of details. Furthermore, while all transcripts were translated into English for publication purposes, the translated versions were not used as basis for analysis. This is because translation to another language can be regarded as yet another reductive process (ten Have, 2007).

Analysis

When a phenomenon worthy of further investigation had been identified and the instances in which it occurred transcribed, the next step was to develop more detailed observations. I began working through all instances of the collection, after which some were selected for in-depth analysis and presentation in the study I was currently working on. I then selected those instances in which the investigated phenomenon was most visible, and at the same time sought to show both similarities and variations of the phenomenon (Sidnell, 2010). The analyses were guided by methodological commitments that are distinctive to the EM/CA approach, of which the three most central to my analyses are presented in some more detail in the following sub-sections.

Taking the participants' perspective

As touched upon in Chapter 3, a fundamental principle of the EM/CA approach is that talk-in-interaction is analysed from the perspective of the participants. In the words of Heath et al. (2010), "[t]he way in which interaction is accomplished by participants, producing 'next' actions with regard to the prior, provides an analytic resource to enable us to examine how participants themselves are orienting to the actions of others" (p. 73). In practice, this means that the analyst, instead of speculating on what feelings or motives underlie an utterance or action, or what the utterance/action might be in terms of theoretical constructs, looks at how utterances and actions are understood by the other participants of the interaction. To take the feedback sequences analysed in Study 2 of the thesis as an example, these are not analysed on the basis of theories and normative models for feedback (see, e.g., Hattie & Timperley, 2007; Nicol & Macfarlane-Dick, 2006), but the focus is put on what the turns produced by students and facilitators *do*, how the production of one turn makes sequentially relevant a next turn, and how this next turn displays its contingency on and responsiveness to the prior.

In Fragment (4) presented below (not selected for presentation in Study 2), for instance, the response turn by the student (ME2) on line 04 provides the analyst with a resource and "a proof criterion" (Sacks et al., 1974, p. 729) for the analysis of the preceding turn by the facilitator (FAC) on line 01. The facilitator's uptake of the student's response on line 07, in turn, shows how the facilitator orients to the student's displayed understanding of the turn on line 01.

Fragment (4)

```
[S-LIU-131031-D3 00:05:46.10-00:06:24.21]
01   FAC:   övervägde du nån gång att- att istället för att gå
            did you consider at any time that- that instead of stepping
02          bort själv kanske be:
            out yourself maybe ask
     FAC:               ((gestures towards ME1))
     ME1:               ((nods))
03             (0.4)
04   ME2:   de kunde ja ha gjort så klart
            that I could have done of course
05   ME1:   °m°
     ME1:   ((nods))
06          (0.3)
```

```
07   FAC:   du ha- precis ja menar måste man ringa alla samtal
            you hav- exactly I mean does one have to make all calls
08          sj:älv eller kan man även delegera de  [ja bara upp-]
            oneself or could one delegate that too [I just up-  ]
09   ME2:                                          [m:          ]
10   FAC:   v- bara väcker frå:gan
            r- just raise the question
```

The sequence shown in Fragment 4 is preceded by a discussion on a specific episode in the simulation scenario: the medical student who had the role as the doctor in charge (ME2) stepped out to make a phone call to the on-call anaesthetist, something that caused an interruption in the ongoing examination and treatment of the patient since the other students were not sure about how to proceed. Fragment 4 begins with a turn by the facilitator (FAC) directed to ME2, "did you consider at any time that- that instead of stepping out yourself maybe ask" (line 01-02). The turn is verbally incomplete in that it does not reveal who ME2 could have asked to make the call, but the facilitator's gesture towards the medical student who had the role of an assisting doctor (ME1) in the scenario as she finishes the turn serves to clarify this. Regarding the design and sequential position of the turn on line 01 it is recognisable to the analyst as either a polar question asking for information on whether ME2 was considering asking ME1 to make the call (*yes-no*), or, as an implicit critique of her not doing so. However, as pointed out above, it is not the analyst's perspective that should be the starting point of the analysis but that of the participants. The latter is provided through the responding actions by the students: ME1's nodding and the verbal response by ME2 on line 04, "that I could have done of course", both treat the facilitator's turn as making a point about ME2's conduct rather than requesting information about her line of reasoning in the scenario. More specifically, the turn by ME2 displays her understanding of the facilitator's turn as a correction of her conduct, to which she responds with acceptance.

Consequently, looking at how the second turn by the addressed student treats the first turn by the facilitator provides the analyst with a proof criterion for the analysis of the first turn in Fragment 4. But how does one know then if the student understands the turn in the way it was intended to be understood? As pointed out earlier in this thesis (see, e.g., Chapter 4 on pedagogical questions) the third position of an instructional sequence is where the first speaker shows his/her orientation towards the second speaker's response to the first turn, either through acceptance/agreement/positive evaluation or correction/disagreement/negative evaluation. Thus, by looking at the facilitator's

uptake beginning on line 07, one can see whether the student's understanding of the first turn is accepted or not. The uptake is initiated with an agreement/acceptance component that accepts the student's response ("you hav- exactly..."). However, what then follows, a repair initiator ("I mean") followed by talk clarifying that the intention is to raise a general issue rather than criticising a specific action ("does one have to make all calls oneself or could one delegate that too I just up- r- just raise the question"), implicitly rejects the student's displayed understanding of the first turn (see, Schegloff, 1992b, on "third position repairs").

To sum up, the proof procedure originally described by Sacks et al. (1974) requires the analyst to pay attention to the mechanisms used by the participants to display their in situ understanding of what goes on in the interaction, and utilise these as tools to validate the analytical observations.

A focus on constituent details

Closely related to the methodological principle discussed above is the focus on constituent details. As should be clear from previous sections, studies of talk-in-interaction involve a focus on minute details, not just of *what* is being said but also *how*. Those not familiar with the methods of the approach sometimes find the level of detail unnecessary and do not see the point of paying attention to particles, intonation, the exact length of pauses and gaps et cetera. However, as pointed out by Kitzinger (2000), conversation analytic studies have proven beyond reasonable doubt that such micro details of talk *are* important since people make use of them to make themselves understood and to understand others involved in the interaction. As Kitzinger (2000) states:

> It is not that conversation analysts suddenly decided they had an absorbing interest in micro-analysing talk and wanted to spend their lives measuring pauses in tenths of a second, or analysing the sequential implicativeness of false starts and hesitations, or the difference between 'uh huh' and 'yes' in backchannel communication. It is that these apparently tiny and insignificant details *are relevant to the participants* in the conversation, and systematically affect what they do next, and how they do it. If we want to understand what people are saying to one another, and how they come to say it, and what it means to them, then we, as analysts, have to attend to their talk *at the same level of detail that they do.* (pp. 173-174, emphasis in original)

Consequently, in order for the analyst to be able to understand what goes on in interaction, one must pay attention to the same details as the participants

involved in the interaction do. Considering Fragment (5) presented below, for example, it begins with a question by the facilitator (FAC) that is verbally directed to the student cohort (no addressee is nominated by name and the plural "you" is used) and asking for what they did well (line 01). It is followed by an additional question formulation which is verbally directed to a nursing student (STU), Vanessa, and asking specifically for what she did well (line 02). Based on the level of detail in the transcript (or rather the lack thereof), not much can be said about what occasioned the facilitator's reformulation of the initial question, but only that it was made.

Fragment (5)

```
[s-GU-130308-D4A 00:11:20 – 00:11:26]
01   FAC:   låt oss börja me å prata va e de ni tycker att ni gjorde bra
            let's begin with talk what is it you think you did well
02          va gjorde du bra Vanessa
            what did you do well Vanessa
```

However, looking at Fragment (6) instead, which is transcribed at a higher level of detail, one can see that the facilitator (FAC) shifts his gaze towards Vanessa (STU) as he reaches the completion of the turn on line 01, which indicates that she is the intended addressee of his question. Vanessa gazes back, thus noticing the facilitator's gaze at her. She makes no attempt to respond, however, but a gap of 2.1 seconds ensues (line 02) during which the facilitator keeps his gaze directed at Vanessa and she gazes back at him. It is not possible to tell from the interaction so far what occasions the gap, but one can note that it is longer than a normal turn-transitional duration and thus an indication of some kind of trouble (Lerner, 1993; Sacks et al., 1974). As produced after this gap, the second question formulation by the facilitator on line 03 becomes recognisable as an attempt to address this trouble, treating it as a matter of ambiguity regarding speaker nomination.

Fragment (6)

```
[s-GU-130308-D4A 00:11:20 – 00:11:26]
01   FAC:   låt oss börja me å prata va e de ni tycker att ni gjorde bra,
            let's begin with talk what is it you think you did well
     FAC:   ((gazes down at his notes))              ((shifts his gaze
                                                      towards STU))
     STU:   ((gazes at FAC))
02             (2.1)
     FAC:   ((gazes at STU who gazes back))
```

```
03   FAC:   va gjorde du bra: (.) Vanessa
            what did you do well: (.) Vanessa
```

As pointed out above, the gap that follows after the facilitator's initial question formulation is longer than a normal turn-transitional space. What can be considered a normal space is known due to a large number of studies that have investigated turn taking in different situations and circumstances, comparing and contrasting a considerable number of cases with each other (e.g., Sacks et al., 1974): a methodology that is also distinctive to the EM/CA approach, and conversation analysis in particular.

Comparison and contrasting

In the conversation analytic research literature, the relevance of comparison is frequently emphasised (e.g., Drew & Heritage, 1992; Haakana, Laakso & Lindström, 2009a; Heath et al., 2010; ten Have, 2007). Haakana, Laakso and Lindström, (2009b), for example, describe conversation analysis as "a comparative approach at heart" (p. 16) for which the analysis process can be summarised in the following way:

> The analysis typically begins with the analyst identifying a phenomenon of interest in the data: a certain type of sequence, a certain action or an interactional (verbal or non-verbal) device. The identification of a potential phenomenon subsequently leads to gathering a collection of relevant instances, and the analytical work consists of a careful analysis of each case as well as the comparison of these cases. This comparative work enables the analyst to identify the recurrent patterns of interaction and to make generalizations about the phenomenon analyzed. (pp. 15-16)

As should be clear to those familiar with comparative methods in other research traditions, conversation analytic comparisons are of a somewhat different nature. In conversation analytic studies it is not about comparing specific parameters (e.g., test results) across time or populations on statistical grounds, but the cases in a collection are compared and contrasted with each other to enable identification of similarities and variations of the phenomenon under investigation. Even if the collection contains many cases that are compared in a systematic way in order to arrive at generalisations, the findings are not statistically reliable. Instead, conversation analytic reliability is fostered through the depth of the analysis (Arminen, 2009; Peräkylä, 2011).

Haakana et al. (2009b) point out that there are several possible levels and dimensions of conversation analytic comparison: it can be made across cultures, identities, competencies, types of interaction, settings, et cetera, and the number of cases can range considerably. A common approach is to investigate the same phenomenon in different types of interaction (e.g., institutional vs. non-institutional, dyadic vs. multiparty, telephone vs. face-to-face) in order to identify variations across the interaction types. In studies of institutional interaction, for example, cases are often contrasted with cases of non-institutional interaction to single out the particularities of the former and find out whether the investigated phenomenon takes context-specific forms (see, e.g., Drew & Heritage, 1992; Maynard, 2003). However, to be comparative, a study does not need to investigate cases collected from different settings or interaction types, but most conversation analytic studies involve some form of comparative reasoning and operations (Arminen, 2009). As a matter of fact, comparative operations frequently play a role already in the identification of a phenomenon. Once the analyst has found a candidate instance of action, the next step is often to compare and contrast this with other actions in the data corpus (Arminen, 2009; Heath et al., 2010), a procedure that applies to the first study of the present thesis. As described earlier in this chapter (see the section on "finding phenomena for investigation"), the video-discussion activity investigated in Study 1 appeared as being worthy of further investigation specifically because it contrasted with the remaining elements of the debriefing discussions. When the instances in which this activity occurred had been gathered, comparison and contrasting of these instances were important in arriving at the finding that the design of the facilitators' questions was crucial to what aspects of the simulation performance the students commented on.

Comparison is also a central feature of Study 3 of the thesis. In this study, however, the cases that were subject to comparison were gathered from two data sets collected in different educational settings: multiparty debriefing conversations for healthcare students (data set 1) and dyadic feedback meetings for upper secondary students (data set 3). Comparison and contrasting of the cases enabled for identification of context-specific and context-independent features of the investigated activity. More detailed descriptions of what the comparative operations of the studies involved are provided in the next chapter that summarises the studies and, of course, in the second part of the thesis that includes the three studies in their entirety.

7. Summary of the studies

Study 1: Experiences, appearances, and interprofessional training: The instructional use of video in post-simulation debriefings

Published as:
Johansson[51], E., Lindwall, O., & Rystedt, H. (2017). Experiences, appearances, and interprofessional training: The instructional use of video in post-simulation debriefings. *International Journal of Computer-Supported Collaborative Learning, 12*(1), 91-112.

The first study of the thesis looks at how video recordings are used as an instructional means to elicit student self-reflection and feedback in the Gothenburg debriefings. The aim of the study is to show how the video in combination with instructional guidance by the facilitators is central to the ways in which the students perceive and talk about their own simulation performance. In line with the ethnomethodological and conversation analytic approach adopted in the study, the focus is put on the minute details of how the analysed activities are locally organised and accomplished.

Previous research investigating the use of video as an instructional means to support reflection and feedback in professional education and training has stressed the importance of appropriate teacher/instructor guidance (e.g., Borko et al., 2011; Erickson, 2007; Fukkink, Trienekens & Kramer, 2011; Zottman et al., 2012). It is argued that without guidance learners may have difficulties in focusing on relevant details of the video recordings. Instead, they may get distracted by "superficial impressions or a one-sided focus" (Fukkink et al., 2011, p. 56). Yet, research studies providing detailed insights into the concrete ways in which teachers/instructors can guide student reflection on video recorded performance remain scarce. The present study addresses this issue through close analysis of the interaction that takes place between facilitators and students after the display of video recorded instances of the students' simulation

[51] Current name: Nordenström.

performance. After stopping the video, the facilitators invited the students to comment on their teamwork and collaboration in the displayed situations.

As demonstrated by the three fragments selected for presentation in the study, the way in which the students analysed and commented on their own performance was highly contingent on the instructional questions asked by the facilitators. Formulated in terms of seeing (e.g., "Did you *see* something that you think works well here?"), and inviting the students to re-evaluate their performance based on how it looked on video (e.g., "Do you have the same sense after you have *seen* it?"; "An' so we *look* at the clip"), the questions made it relevant for the students to position themselves as observers and comment on how the displayed situations appeared audio-visually, and to contrast these appearances with their recollected experiences.

The first fragment provides an example of how the video and the facilitator's question made it relevant for the responding student to address how her own and the other students' teamwork appeared on video rather than how she experienced the situation (e.g., "I looked calm", "we were talking loud"). The same phenomenon can be observed in the other two fragments selected for presentation. In addition, the analysis demonstrates how the video is used to establish contrasts between the students' recollected experiences and the visual appearances of the displayed situations. The third fragment, for example, shows how the video is used to provide an additional and contrasting perspective of the students' teamwork. After having shown a video recorded instance, the facilitator asks questions that invite for contrasts between the students' first-hand negative experiences of the scenario, and the visual appearance of the displayed situation. These questions by the facilitator, and comments from a fellow student, eventually result in that one of the students who took part in the scenario explicitly acknowledges that her earlier reported feeling of insecurity was not reflected in the video clip ("I don't think that sense is like reflected in the clip- like one- it's not outwardly visible"), thus reconceiving her own conduct based on how it appears on video.

To sum up, while there are certain differences between the analysed fragments, they all demonstrate the central role of the facilitators' guidance. The analyses show that the design and sequential positioning of the facilitators' eliciting questions and follow-up questions, as well as the contributions of peers, help focus the students' attention on how their teamwork and collaboration appear from an observer perspective in the situations displayed on video, and encourage them to contrast these appearances with their recollected first-hand

experiences. Consequently, a central finding of the study is that video is conducive, but not in itself sufficient to enable students to reflect on professionally relevant aspects of their own performance in an objective manner. For this purpose, instructional guidance is of crucial importance.

Study 2: Local corrections and general advice: Instructor uptake of student peer-feedback in healthcare simulation debriefings

Nordenström, E. (unpublished manuscript)

The second study focuses on how students and instructors at the Linköping site "do feedback" in post-scenario debriefings. More specifically, the interest is in what the possibilities are for students and instructors, respectively, with regard to their knowledge, experience, and institutional identities, to evaluate the students' simulation performance against professional standards and norms, and provide recommendations for future work practice. Unlike the debriefings investigated in Study 1, which were organised according to a pre-planned model with clear phases and scripted questions, the eight debriefings investigated in the present study were organised according to a "laissez-faire approach". As pointed out in Chapter 2, this means that the debriefings were carried out without a pre-planned guiding structure or clearly expressed aims, but the facilitators largely left to the students to raise issues for discussion. The study investigates episodes initiated with a student giving critical feedback on the performance of one or more student peers, followed by a response from the addressed student/s, and subsequently an elaborate uptake by an instructor. Two research questions are addressed: a) What are the characteristics of, and differences between, students' feedback to peers and the instructors' uptake of this feedback?, and b) What functions do the instructors' uptake fulfil vis-à-vis the feedback provided by the students?

Previous interactionally-oriented studies investigating teachers' provision of critical feedback, including corrections, negative assessments, and advice, in the contexts of higher and professional education and training show that teachers mostly treat such actions as unproblematic and associated with their institutional roles. When delivering critical feedback to students, teachers sometimes do "face work" (e.g., Copland, 2011) or mobilise certain resources for forestalling and managing potential resistance (e.g., Vehviläinen, 2009; Waring,

2017), but they rarely couch the feedback with minimising features, accounts or hedges. Rather, teachers' critical feedback tends to have an instructive character in linking the students' educational performance to professional/disciplinary standards, norms, and principles (e.g., Hindmarsh et al., 2014; Waring, 2017). Students' critical feedback to peers, by contrast, are often unelaborated, hedged and downgraded, and formulated as subjective opinions rather than objective observations (e.g., Copland, 2011; Ekström, 2013): features that display an orientation towards the critical feedback as an interactionally delicate and problematic project.

While the bulk of previous studies on educational feedback have concentrated on either student *or* teacher/instructor feedback, the present study addresses both forms of feedback. As demonstrated by three extracts selected for presentation in the study, the possibilities for students and instructors to provide critical feedback on student performance in this context are different. While the students' feedback is produced in a way that display their own orientation towards the feedback as interactionally delicate and/or is treated as such by the other students and the instructors, the instructors organise their feedback in a way that display their entitlement to assess, correct and advise student performance. Further, the analysis demonstrates characteristics and differences of the feedback that are not related to interactional conditions, but concern the students' and instructors' abilities to relate the educational performance to domain-specific standards and reasoning in a way that provide for future professional conduct. In one of the analysed extracts, for example, a student identifies an error in another student's use of a specific medical device in the simulation scenario and contrasts it with the correct alternative ("Eighty-five that's not the pulse it's map[52]"). This local, specific, and retrospectively oriented correction provided by the student is subsequently expanded with a general and future-oriented advice by the instructor ("have as a habit when you'll start working now at whatever clinics it is make sure that you're well familiar with the equipment you're gonna use"). Unlike the student's correction, the instructor's uptake is not concerned with the use of a specific medical device but concerns the use of medical equipment in general (local and specific vs. general); it does not propose alternative approaches to prior actions but to future ones (retrospective vs. future-oriented); and it is not only relevant to the student who performed the mistake but to the entire group of students (individually-oriented

[52] "map" is an abbreviation of "mean arterial pressure".

vs. group-oriented). Thereby, the uptake fulfils an important instructional function vis-à-vis the student's feedback, both in relation to the skills required for *practicing* healthcare communication and teamwork, and those required for *reflecting upon* and *giving feedback* on such work in professionally relevant manners and terms. The other analysed extracts show examples of the same sequence type, that is, sequences beginning with local, specific, retrospective, and individually-oriented corrections by the students that are subsequently expanded by the instructors with general and future oriented advice that suggest general strategies applicable to both the present educational situation and future professional practice.

The findings summarised above can be considered in the light of the organisation of the debriefings, the institutional identities of the involved parties, and their previous knowledge and experience. Without receiving specific instructions on what issues to comment on and how, as well as having no prior professional experience of practicing and evaluating healthcare teamwork, the students' abilities to provide feedback of an instructive, recommending, and generally prescriptive format were limited. The instructors, by contrast, were experienced practitioners of both medical work and teaching, and could thus rely on knowledge and experience that the students did not possess: something that was evident from the way in which they designed their contributions. In providing uptake of the students' peer-feedback, the instructors utilised their professional expertise to relate local and individual problems to larger disciplinary principles and standards, thereby providing for future work practice.

Study 3: Evaluative conduct in teacher-student supervision: When students assess their own performance

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The third study looks at how students assess their own performance in response to teacher/instructor elicitations: a routine practice of feedback encounters in various educational settings. By specifying how the investigated activities play out in real-time practice, the study seeks to explicate the tension between

strategies for facilitating self-assessment advocated in the pedagogical literature (see, e.g. Bjørndal, 2016; Nicol & Macfarlane-Dick, 2006; Lauvås & Handal, 2014; Sawyer et al., 2016) and the way in which self-assessments are actually organised.

The study is informed by previous work within conversation analysis that investigates assessment practices in mundane and institutional interactions (e.g., Goodwin & Goodwin, 1987; Pomerantz, 1978; 1984; Speer, 2012). As demonstrated by this work, self-assessment is a complex activity constrained by social norms operating such that speakers actively avoid praising their own achievements or do so with great caution. Self-deprecation or self-critique, by contrast, is typically treated as less delicate (see, e.g., Pomerantz, 1978; Speer, 2012). These norms are present in both mundane and institutional interactions, despite that self-assessment in the latter type of interactions is often both expected and explicitly requested (e.g., Copland, 2010; Waring, 2014).

While Study 1 and Study 2 examine feedback and instructional guidance exclusively in the context of healthcare simulation debriefings, the present study uses and compares recorded data from two educational settings to broaden the foundation for drawing conclusions on the investigated activities. The first data set consists of multiparty debriefings from the Gothenburg site, and the second data set consists of dyadic feedback encounters for students at a Norwegian upper secondary school. The study analyses instances collected from these two settings in which the facilitators/teachers invite the students to assess their own performance in the preceding simulation scenarios/oral presentations. All eliciting questions are of an open-ended nature, but differ in design and focus along the following three dimensions (see also Waring, 2014): 1) positively-tilted questions (e.g.,"What did you do that was good Bella?"), 2) un-tilted questions (e.g., "How do you think it went yourself?"), and 3) negatively-tilted questions (e.g., "Is there something you should have done differently?").

The analysis shows that the students frequently exhibited difficulties in responding to the questions, particularly those that were positively-tilted and un-tilted. The positively-tilted questions, which occurred in the post-simulation debriefings, were met with delayed and hesitative responses consistent with the norm of self-praise avoidance by, for example, attributing the positive assessment to joint performance (e.g., "I thought nevertheless I and Rebecca had a pretty good communication"). The un-titled questions, which occurred in the post-presentation feedback encounters, occasioned unelaborated "okay"-responses, that is, assessments that were either overtly positive or negative (e.g.,

"it went quite okay"), followed by accounts, disclaimers or qualifications (e.g., "it went better than I expected given that I started on it [the presentation] yesterday"). By explaining and validating the assessed performance or presenting it as contrary to what the student expected, these responses also displayed an orientation to the norm of self-praise avoidance. Finally, the negatively tilted questions, which occurred in the debriefings, received direct and strong critical self-assessments (e.g., "I should have reported much better to you according to SBAR when you came in because that I didn't do that was very bad") which suggests that self-critique was perceived as less delicate than self-praise.

Consequently, in both investigated settings, the students' orientation to the norm of self-praise avoidance was found to be a central reason to the ways in which they approached the different types of invitations for self-assessments. However, this was not the only reason identified. As suggested by the analysis the students' difficulties and resistance to respond were also due to the open-ended nature of the questions and the asymmetries in knowledge and institutional positions between the students and the teachers/facilitators. While the questions were designed to invite the students' perspectives of their own performance (e.g., "let's talk about what you think works well", "how did you think it went yourself?"), they were not approached as such by the students. Instead, the students frequently oriented to the invitations as exam questions for which they had difficulties to identify the right answers. This understanding was confirmed by the teachers'/facilitators' third-turn uptake: the students' responses were not treated as mere reflections, but rather as displays of their ability to identify relevant aspects of their own performance. Although the students' responses were not evaluated in terms of "right" or "wrong", the ways in which the teachers/facilitators organised their uptake displayed their entitlement to decide what answers were sufficient to close the sequences and move on to the next issue.

The study manifests and adds to findings of previous work on evaluative conduct by demonstrating how social norms and epistemic and institutional asymmetries operate in self-assessment activities. In addition, the study shows that there is a divergence between guidelines provided in the pedagogical literature and empirical practice. While in theory, soliciting self-reflection and self-assessment through open-ended questions is an effective and learner-centred method to address issues on the learner agenda (e.g., Eppich & Cheng, 2015), the analyses undertaken in the present study show that this not necessarily resonate with real-time educational practice. Accordingly, while pedagogical

models and principles may serve as overall guidelines for how to organise self-assessment activities, social, epistemic and interactional conditions need to be considered in situ, as the activities play out.

8. Discussion

As stated in Chapter 1, the overall aim of this thesis is to shed further light on what formative feedback activities in which students are actively involved, and instructional guidance of such activities, look like in terms of actual practice. To address this aim, the thesis has investigated feedback activities in the context of simulation debriefings for healthcare students in three separate empirical studies. The studies focus on different phenomena, but are interconnected through an interest in the following three themes: 1) the instructional guidance by the facilitators, 2) the organisation of the students' feedback contributions, and 3) the practical application of models and principles of "good practice". Although these themes overlap, which makes it difficult to isolate them from each other, this chapter is divided into three sub-sections that discuss each one of these themes. The chapter then concludes with a section that summarises and highlights the main findings of the thesis and discusses the pedagogical implications.

The instructional guidance by the facilitators

In the literature on methods for healthcare simulation debriefings, it is largely agreed that instructional guidance by facilitators is vital to support reflection and learning of the tasks and skills practiced in the simulation scenarios. It is emphasised, however, that the main responsibility of the facilitator is not to teach or provide directive feedback, but to guide the learners through a reflective discussion and critical analysis of their own simulation performance. For this purpose, facilitator questions are thought to play an important role. Most pedagogical models and methods for debriefing presented in the literature recommend that the facilitator use open-ended questions to invite learner reflections and assessments that reveal what issues they find most important to address. These issues should then be subject to further inquiry by the facilitator to provoke in-depth discussions that ultimately result in formulations of lessons learned from the scenario. If the learners' answers reveal gaps in knowledge or performance, expert feedback by the facilitator is recommended to close these gaps (see Chapter 2 for a more detailed overview).

The methods for fostering learner self-reflection and assessment described in the healthcare simulation research literature were widely adopted by the training settings under study. At the Gothenburg training site, the facilitators used a debriefing model that had many features in common with the models presented in the literature summarised in Chapter 2. At the Linköping training site, the facilitators applied what is sometimes referred to as a "laissez-faire approach" (see Chapter 2 for an explanation). While the research literature provides descriptions of how these methods are intended to be implemented, and report on the perceived or measured efficacy of their implementation, the thesis has set out to provide a detailed picture of how they are realised in real-time educational practice. The empirical studies of the thesis reveal that the investigated practices involved a variety of features that were not articulated in the research literature or local guidelines but were nevertheless fundamental to the organisation of the investigated practices. This is, of course, not unique to the investigated case, and could be seen as an unavoidable aspect of all institutional practices. As maintained by Peräkylä and Vehviläinen (2003):

> Practices are not accomplished merely by following theories, models or concepts. Theories and models are general idealizations, whereas practices are carried out in situ. Theories and concepts related to practices consist of ideals and visions of the 'best possible situations', whereas institutional practices constantly deal with the range of cases that do not reach such ideals. Furthermore, institutional practices always involve aims that are not articulated as 'goals' or 'ideals', but nevertheless fundamentally organize the actual practice. (p. 728)

Study 1 and Study 3 of the thesis analyse the organisation of facilitator questions in the debriefing conversations conducted at the Gothenburg training site. As demonstrated by these studies, details in the design and sequential positioning of the facilitators' questions were crucial for how they were received and responded to by the students. Consequently, small variations in the facilitators' verbal formulations of the pre-defined questions specified by the debriefing model and the local environment in which these questions were posed had implications for how they were understood. An example is the questions asked by the facilitators after the display of video recorded instances of the scenarios (see Study 1). In line with the structure of the debriefing model, the stated aim of these questions was to elicit student reflection and positive assessment of the simulation performance that was shown on video. In practice, however, the facilitators' questions were not merely direct applications of the predefined

question formulation specified by the debriefing model ("what worked well?"), but their design and production were contingent on prior actions in the debriefings. As a result, the questions fulfilled additional functions along with eliciting positive assessments from the students. For example, while the facilitator's question in the first example presented in the study (Fragment 1 in Study 1) was grammatically close to the written formulation of the debriefing model, details in the verbal formulation meant that it did not only make relevant for positive assessment of the students' simulation performance in general, but also served to direct the focus towards *audio-visual* aspects of the performance ("did you *see* something that you think works well here?"). Whilst this may appear as a minor detail, the analysis of the debriefing conversations revealed that in the absence of such questions the students tended to take as a starting point their first-hand experiences of the displayed situations which meant that the additional perspective provided by the video remained unutilised. In the other two fragments presented in Study 1 (Fragment 2 and 3), the questions asked by the facilitators were even more closely tied to the local nature of the debriefings. Although the questions shared the same overall agenda, that is, to elicit student reflections and assessments of the simulation performance shown on video, they were also contingent on previous contributions by the students and designed to address the concerns raised by these contributions: features that were not articulated in the debriefing model.

The facilitator questions analysed in Study 3 were all recognisable versions of two of the predefined questions of the debriefing model: "what worked well?" and "what would you like to do differently?" (see Figure 5). However, common to the examples of the former question presented in the study was that the facilitators made a similar reformulation of the written version as they addressed the question in the debriefings: all questions were phrased in terms that made relevant for positive assessments of the *individual* conduct of particular students (e.g., "what did you do that was good Bella?"/"Va gjorde du som va bra Bella?"). As demonstrated by the analyses, these questions occasioned interactional difficulties and resulted in extended sequences where the students withheld rather than shared their perspectives on their own simulation performance. Grammatically, open questions like these do not presuppose answers known by the questioner but request the perspective of the recipient. However, when applied in a context such as the debriefing conversations where the facilitators had equal access as the students to the performance that was being evaluated, and assumed rights and competence to determine whether this

performance met the stated goals of the training as well as standards and principles of the profession, the questions were not understood in such a way. Instead, as Study 3 demonstrates, the students responded with caution and resistance, which suggested that they understood the questions as having a testing potential (see also Waring, 2014). Consequently, under these circumstances, the open-ended nature of the questions inhibited rather than promoted reflection. In summary, Study 1 and Study 3 show that the facilitators' questions were clearly structured with reference to the debriefing model used at the Gothenburg simulation centre. However, in addition, the question sequences hosted features that were not articulated by this model, which were found to be crucial to how the interactions unfolded.

While questions emerged as a vital resource to elicit and guide the students' contributions, the instructional work by the facilitators took other forms as well. As demonstrated by Study 2, feedback on the student contributions constituted a central instructive resource. In the healthcare simulation research literature, feedback is largely defined as information provided by an expert to a more junior party with the purpose to close the gap between actual and desired work or performance (see Chapter 2). Although such formulation makes implicit that the information is responsive to some action or achievement by the recipient/s of the feedback, it has a connotation of one-way transmission rather than interactive dialogue. This view of what feedback means as an element of debriefing is nuanced in Study 2. Based on debriefings conducted at the Linköping training site, the study shows that facilitator feedback can be more than corrective information provided with the aim to address knowledge or performance gaps revealed by the students' answers to the facilitators' questions. As a feature of the studied debriefings, facilitator feedback was a highly contingent activity that emerged out of the moment-by-moment interaction between the students and facilitators. In the sequences presented in Study 2, the facilitators feedback was produced in response to feedback contributions by the students, the latter which addressed specific actions by student peers in the preceding simulation scenarios. Building on, detailing, and challenging the students' peer-directed feedback, the facilitators' contributions addressed multiple purposes and addressees (see also Lindwall & Ekström, 2012). By elaborating on the students' local, retrospective and individually-oriented corrections with general and future-oriented advice that invoked professional reasoning and standards, the facilitators' feedback addressed "knowledge gaps" related to both the accomplishment and assessment of healthcare teamwork. Although produced in response

to prior sequences involving only a few students, the general nature of the facilitators' feedback meant that it was not only relevant to these students but to all students in the group.

In addition to nuancing the notion of feedback, Study 2 serves to demonstrate the mismatch between an ideal that is widely advocated in the healthcare simulation research literature and actual educational practice: the facilitator's role as a "conversational guide" or "co-learner". As demonstrated by the analyses presented in Study 2, as well as those presented in Study 1 and Study 3, the way in which the facilitators organised their actions displayed an entitlement to control the agenda of the debriefings as well as their knowledge and experiences of the professional skills that were the focus of the training. This positioned them as instructors rather than conversational guides or co-learners. It should be noted, however, that this did not mean that the facilitators adopted an authoritarian and dominant approach. As emphasised in the next section, the debriefing conversations were largely centred around the students' concerns.

The organisation of the students' feedback contributions

The facilitators at both training sites were careful to emphasise that the debriefings should be focused on the students' contributions. To provide an example, although the facilitators at the Gothenburg training site adhered strictly to the pre-planned debriefing model they nevertheless made clear that the students' reflections and concerns should be the focus of the discussions. As one of the facilitators said to the students at the beginning of the debriefing: "you own the journey, right, so now you shall tell each other what you think and feel". This intention was largely reflected in the debriefings for which the students' contributions could be characterised as the core.

When gathering in the debriefing room to discuss the scenario, both the students' who had taken part in the scenario and those who had observed it were invited to comment. This meant that the students' simulation performance was discussed both from an actor and an observer perspective. In one sense, these perspectives could be regarded as equivalent; both actors and observers had access to the entire course of events in the scenario as it unfolded, either from "within" or via live video/through a one-way window from an adjacent room. To be able to reflect on the scenario in retrospect in the debriefing, both actors and observers were required to first recollect and reconstruct their real-

time perceptions. As Lederman (1992) puts it: "[t]he experience on which the debriefing focuses has already occurred. Because it is prior to the debriefing, the debriefing session involves some recollection of that experience. Part of the process of debriefing is to provide a reconstruction of the experience" (p. 151). However, while all students took a starting point in recollections of the same event, their contributions revealed that the actor and observer perspective provided access to different aspects of this event: while the actors tended to recount what they had been *thinking* and *feeling,* the observers commented on what they had *seen* and *heard*. These first-hand experiences by the actors and audio-visual impressions by the observers were not always compatible with each other, something that came into the forefront in the situations where video recorded instances of the scenarios were used as a basis for reflection and discussion. While the actor perspective otherwise tended to give primary rights to tell how things had *actually* played out, the displaying of video enabled for the observer perspective to take precedence (see Study 1).

A finding that is central to all three studies of the thesis is that both self- and peer-directed feedback regularly presented the students with difficulties, both of interactional and subject-matter character. As for evaluations of the students' own simulation performance, these were organised in ways that displayed an orientation by the students towards the interactional constraints against self-praise described in previous studies of talk-in-interaction (e.g., Pomerantz, 1978; 1984; Speer, 2012). Positive self-assessments were avoided as far as possible and when provided, they were typically accounted for, downgraded, hedged or produced with disclaimers. In contrast, negative self-assessments were often delivered in a direct format without delay, hesitation or other minimising features, which suggested that the students perceived self-critique as a less problematic action (see Study 3). Also, the ways in which the students responded to self-assessments by their peers were in line with these constraints. As shown in one of the fragments presented in Study 1 (see Fragment 1), for example, a student's positive evaluations of her own performance displayed on video were met with loud laughter by the other students, a responding action that indicated that the positive self-talk violated prevailing norms. Self-critique presented by the students, on the other hand, was frequently disagreed with and challenged by fellow students (see, e.g., Fragment 2 in Study 1). Hence, by and large, the students took a supportive rather than critical attitude towards each other's simulation performance (cf. Pomerantz, 1984), something that was also evident from their first position feedback turns: feedback on the performance

of peers was largely phrased in positive terms and when occasionally critical, the feedback was with few exceptions marked as dispreferred (see Study 2).

The interactional difficulties discussed above are not unique to the debriefings under study, but these findings correspond with the results reported in previous research on evaluative conduct (see Chapter 4 for an overview). The results of the previous research, as well as those of this thesis, show that social norms of self-praise and other-critique are not only present in mundane interactions such as the friendly conversations studied by Pomerantz (1984), but also in institutional interactions such as the post-teaching feedback conversations for teacher trainees examined by Copland (2010; 2011; 2012). Like the debriefings investigated in this thesis, these feedback conversations provide an example of a context where the stated expectations for self- and peer-assessments could be thought to render them socially unproblematic (see also Asmuß, 2008). As suggested by Copland (2010), possible reasons to why this was not the case were that the teacher trainees involved in the feedback conversations neither understood how to "play the game" of group feedback nor possessed the communicative and subject matter skills required for assessing the performance of peers and delivering appropriate feedback.

> [A]ssessing peers requires an understanding of what is required in teaching practice, an ability to observe and record the teaching of others, and, most importantly perhaps, an ability to provide feedback which is both appropriate in content and appropriately delivered. (p. 467)

As argued in the quotation, good feedback is a product of both delivery and content. With regard to the former, Copland (2010) maintains that a clear introduction to what is expected from the participants can help to overcome "incompatibility between the participatory structures introduced in group feedback and trainees' understanding of what these participatory structures entail" (p. 472), something that is otherwise likely to result in tensions and disquiet.

As was the case for the teacher trainees participating in the feedback conversations examined by Copland (2010), the students in the debriefings did not receive any detailed instructions on the social dimensions of the delivery and recipiency of feedback. Besides from occasional clarifications that the conversational climate should be friendly and permissive, the introductory instructions provided by the facilitators mainly concerned the content focus and structure of the debriefing conversations. Given this arrangement, there seemed to be an expectation that the students possessed the skills needed to reflect upon and

give feedback on their own and each other's simulation performance or, alternatively, that such actions were a given product of the facilitators' questions.

Regarding the second issue addressed by Copland (2010) above, that is, to provide feedback that is appropriate in content, this also constituted a difficulty for the students in the debriefings. In line with Copland's (2010) argument, assessing peers requires an ability to observe and record their performance in real-time as well as an understanding of what is required in professional practice. As demonstrated in Study 2, the students tended to comment on how the simulation performance of their peers affected them personally rather than what the consequences were for teamwork and communication. Given that the students were novices lacking experience of working in interprofessional healthcare teams, this finding is hardly surprising. However, it is nevertheless important as it emphasises the central role of complementary feedback from facilitators to demonstrate the relationship between the students' simulation performance and established principles and standards of the profession.

The practical application of models and principles of "good practice"

The last question addressed by this thesis concerns how normative models and principles of "good practice" were invoked, topicalized and acted upon – explicitly or implicitly – in feedback and instructional work by students and facilitators. The empirical studies reveal that two types of models featured in these activities: 1) the models for teamwork and communication that were to be practiced in the simulation training, and 2) the models/approaches around which the debriefings were structured.

As outlined in the first two chapters of the thesis, an essential aim of the simulation training at both sites under study was to provide the participating students with opportunities for hands-on training of certain techniques, models, and algorithms for effective team collaboration and communication, including the *speak up* and *closed loop* communication techniques, the *SBAR* reporting-structure, and the *ABCDE-sequence* (see Chapter 5 for descriptions). These models, which were available to the students in written form in textbooks, on the whiteboard in the introductory lectures preceding the simulation training, on posters in the debriefing room, or on memory-cards distributed during the training occasions, could be likened to manuals on how to perform certain actions and tasks related to teamwork and communication. For example, the

SBAR-structure, as illustrated on a memory-card handed out to the students at the Gothenburg training site, took the form of a stepwise manual for how to report the patient's condition to other healthcare practitioners. For each step of the SBAR-structure (i.e., *S*ituation, *B*ackground, *A*ssessment, and *R*ecommendation), there were instructions on what actions the provider of the report should perform. To take the first step as an example, that is, reporting of the situation, it required for the provider of the report to tell his/her own name, title, and unit, followed by the name, age, and personal identity number of the patient. While instructions like these may seem very explicit as they provide stepwise directives for what to do ("first say x, then say y"), ethnomethodological and conversation analytic studies have pointed to the inherent openness of written instructions that are designed to be applicable to a wide range of people in a number of different situations (e.g., Garfinkel, 1967, pp. 18-24; Garfinkel, 2002). As pointed out by Lindwall et al. (2015) such instructions "are always incomplete in the sense that they always need to be worked out in relation to the particularities of the situation" (p. 145). For the students, the first step of working out the instructions provided by the models in relation to "the particularities of the situation" involved for them to "enact the instructions into specific courses of action" (Lindwall et al., 2015, p. 146) in the simulation scenarios as they examined the patient, reported his/her condition to the other members of the team, et cetera. Thereafter, the models became subject to joint discussions in the debriefings, which could be seen as a crucial step for the students to develop an understanding of how they should be enacted in clinical practice. When commenting on the students' simulation performance, both students and facilitators regularly addressed the students' application of the models (or lack thereof) in the preceding scenario. For the students, this could involve describing their actions in the scenario in terms of a particular model/technique (e.g., "we spoke up", "I started with A"). Establishing *that* they had used the models rather than explicating *how*, such statements by the students worked to *claim* rather than *demonstrate* their use of the models (see Sacks, 1992, vol. II, Lecture 9). That is, the statements did the job of highlighting the students' attentiveness towards the stated learning objectives of the training (e.g., the ability to use the speak up technique and the ABCDE-sequence) rather than demonstrating their understanding of how these learning objectives could be put into practice. The facilitators on their part, tended to make more explicit connections between the models that were the focus of the training and certain actions performed by the students in the simulation scenarios. This could involve displaying a video

recorded instance of the preceding scenario and clarifying that it showed the accomplishment of a certain model or technique for teamwork/communication (see, e.g., Fragment 2 in Study 1 where the facilitator shows a video clip and expresses that it shows an example of a very clear situation report), or reformulating a student's description of a certain action undertaken in the scenario in terms of a specific model/technique (e.g., "so a very nice type of *speak up* thus"). Such moves by the facilitators were evidently instructive and served to explicate the relationship between theory and practice.

While models of the kind discussed above are designed to support the accomplishment of specific elements of healthcare teamwork and communication, models and methods for debriefing are designed to support reflection, analyses, and assessment of such elements. Models for debriefing typically comprise clear phases and pre-defined questions that are aimed at generating certain kinds of contributions from the learners, such as emotional ventilations, factual descriptions of the course of events in the simulation scenario, self-assessments of what worked well and what could be improved, and formulations of lessons learned (see Chapter 2). This also applied to the debriefing model used by the facilitators at the Gothenburg site. As shown in Figure 5, this model included three phases (description, analysis, and application) that each specified one to two questions to ask the learners. Represented on a poster in the debriefing room and used by all facilitators working at the simulation centre, this model was fundamental to the organisation of the debriefing conversations. While the facilitators' wordings of the pre-defined questions varied to some extent (see the first section of this chapter), all facilitators were careful to address the questions in the exact order in which they were listed in the model. Deviations from the pre-planned structure were not accepted, which meant that the facilitators occasionally rejected or postponed student answers with the motivation that they were not in line with the the step of the model that was being discussed (e.g., "now we only talk about what happened nothing else"). Consequently, student responses were not only evaluated on the basis of their relevance to the content focus of the discussion, but also on the basis of their compliance with the steps of the debriefing model. Earlier in this thesis it was explained that such an approach is grounded in a stated belief that strict adherence to the pre-planned debriefing structure is beneficial to student reflection and learning of the skills practiced in the simulation scenario (see Chapter 2). Jaye et al. (2015), for example, argue that "facilitators need both specific techniques and a clear structure to optimise learning during a debrief" (p. 175). In contrast, so-called

laissez-faire approaches rest on the assumption that openness facilitates reflection and learning. In line with such approach the facilitators at the Linköping training site did not use any pre-planned model. Instead, the debriefings were organised in a way that seemingly allowed the students to decide the focus and direction of the discussions. However, a close examination of the eight Linköping-debriefings investigated in this thesis revealed that they were organised in a recognisable structure that manifested certain pedagogical standpoints. For example, in all eight debriefings, the discussion was initiated with a similar open-ended question by the facilitator (e.g., "You're welcome to speak freely. Spontaneous comments, anything and anyone", see also Figure 15 for additional examples). However, while the design of the opening question suggested that it was entirely up to the students to decide what issues or topics should be addressed, by whom, and in what way, the way in which the facilitators organised their responding actions showed that they, after all, had clear opinions about how the discussions should play out. To take the first example presented in Study 2 as an example (see Extract 1 in Study 2), the responding actions by the facilitator reflected a certain idea of how feedback on the students' simulation performance should be designed and delivered: not as a series of corrections read from a list, but that one issue at a time should be addressed and all students in the group as well as the facilitator should be given the opportunity to comment on this issue before moving on to the next.

Concluding remarks

Taken together, the results of the thesis establish that feedback conversations are complex events that present challenges for both students and teachers/instructors. In many educational settings, the investigated simulation training under study included, post-performance reflection and feedback are not clearly defined tasks. Thus there seems to be an assumption that these are tasks that students simply master. In the settings under study, there were established frameworks for how the debriefing conversations should be structured. By contrast, instructions and advice regarding the methods for observing, critically analysing, evaluating, and commenting on the students' simulation performance against the background of certain principles and standards were scarce. As suggested by the results of the thesis, it was not always obvious to the students who took part in the debriefings what these tasks involved, neither on a social or conceptual level. In real clinical practice, practitioners who evaluate their own

performance or give feedback on the work of colleagues cannot (or at least should not) phrase their comments with regard to social norms of tact and politeness, but sincerity and constructiveness must be prioritised in order to ensure safe and high-quality patient care. However, based on the students' way of approaching the task of providing feedback on their simulation performance, it can be stated that finding the right balance between collegiality and professionalism is not an ability that novices simply possess, but it is something that require practice and appropriate guidance. The same issue applied to the ability of producing feedback that was appropriate in content, this too tended to be problematic for the students. The principles and standards against which the simulation performance should be evaluated consisted of models, techniques, and algorithms for healthcare teamwork and communication, as well as principles for interprofessional collaboration. While the former kind of models were relatively concrete in the sense that they took the form of stepwise directives for how to perform certain actions and tasks (e.g., how to deliver a handover report or perform a structured examination of the patient), the latter was more abstract in consisting of ideals and approaches to team collaboration (e.g., "learn from and with each other", "contribute with profession-specific strengths and skills"). However, common to all models, techniques, algorithms, and ideals that were the focus of the training was that the students had limited theoretical knowledge of them and lacked experience of applying them in practice. A central purpose of the simulation training was to enhance these skills by the students, and reflecting upon and providing feedback on their own and each other's simulation-based practice of the interprofessional teamwork skills was considered an important step in reaching this goal. Paradoxically, the training arrangement required skills and competencies that it was intended to provide: evaluating and providing feedback on the accomplishment of certain models/techniques for team communication in appropriate ways require prior knowledge of what the practical application of these techniques should look like. The instructional guidance by the facilitators was thus not only vital for clarifying in what ways the students were expected to comment on their own and each other's simulation performance, but also for explicating the relationship between the abstract conceptual apparatus and professional practice.

Traditionally, the principal motivation of EM/CA informed studies of institutional interactions have not been to produce results that are of import to the practitioners of the setting under study. Instead, emphasis has been placed on producing detailed and "neutral" accounts of how routine institutional activities

and procedures are brought about. However, in line with some more recent strands of EM/CA research that strive to generate results that have implications for practice (e.g., workplace studies and applied conversation analysis), the ambition of this thesis is to present findings that not only inform other researchers but can be of utility to educational practitioners as well. A central contribution of the thesis is its detailed demonstration of how the instructional guidance by the facilitators was interactively, sequentially, and topically organised, and how this practical organisation diverged with the normative models, principles, and ideals described in the research literature and best-practice guidelines. The argument is made that the detailed account of the organising features that constituted the studied practices form a basis against which teachers and instructors can consider their own instructional guidance of feedback activities. In some respects, these organising features are of course specific to the feedback activities under study, something that motivates the question to what extent the findings are applicable to other educational settings. In relation to this question it is worth noting that for practitioners in other settings, what might be of interest is not primarily how specific pedagogical models, questioning techniques and the like are applied in practice. Rather, what might be of interest is what Peräkylä (2011) refers to as *possibilities*: although a practice such as a questioning technique might be unique to the setting under study, the very details of the participants' actions that make this practice *possible* (e.g., turn allocation, turn design, sequence organisation et cetera) are most likely to be found in other settings as well. Furthermore, to arrive at findings of a more generalisable character the thesis has used empirical material collected in another setting as a basis for investigation and comparison in one of the empirical studies. It should be noted that conversation analytic comparison is not without problems (see Schegloff, 2009), but for this study the method has contributed to strengthen the analytical claims by showing that the results hold true for more than one setting.

To conclude, this thesis takes an interest in formative feedback activities and the instructional possibilities that such activities present. Exploring this interest in three separate empirical studies in the context of simulation-based team training for healthcare students, the thesis nuances and enriches our understanding of feedback and instructional guidance in empirical, conceptual, and practical ways.

9. Swedish summary

Återkoppling och instruktiv vägledning i debriefing-samtal efter simuleringsbaserad teamträning för studenter i vårdutbildning

Inledning och bakgrund

Forskningen som rapporteras i den här avhandlingen fokuserar på pedagogiska aktiviteter där studenter reflekterar över och ger återkoppling (eng. "feedback") på sina egna och andra studenters prestationer under vägledning av lärare. I forskningslitteraturen framhålls det att studenters aktiva deltagande i återkopplingsaktiviteter är gynnsamt för deras lärande av både kommunikativa och ämnesmässiga färdigheter (t.ex. Andrade & Valtcheva, 2009; Black & Wiliam, 1998; 2009; Boud, 1995; Liu & Carless, 2006; Nicol & MacFarlane-Dick, 2006). Detta gäller både formativ bedömning, det vill säga aktiviteter som syftar till att förbättra pågående arbete, och summativ bedömning av avslutat arbete. Den här avhandlingen undersöker emellertid uteslutande aktiviteter av formativ karaktär.

Andrade och Valtcheva (2009) menar att självbedömning (eng. "self-assessment") främjar studenters lärande och framtida prestationer då det kräver att studenterna reflekterar över kvaliteten på sitt eget arbete istället för att enbart förlita sig på lärarnas omdömen. Även kamratbedömning (eng. "peer-assessment") anses gynna lärande, till exempel genom att det hjälper studenterna att ta aktiv kontroll över sitt eget lärande och utveckla ett objektivt förhållningssätt till bedömningskriterier (t.ex. Boud, 1995; Liu & Carless, 2006; Nicol & MacFarlane-Dick, 2006). Samtidigt betonar litteraturen att både själv- och kamratbedömning är komplexa aktiviteter som kräver träning och vägledning för att kunna utföras på ett lämpligt sätt (se t.ex. Dochy et al., 1999; Nicol & MacFarlane-Dick, 2006; Sluijsmans & Prins, 2006; Taras, 2003; 2008). Lärare/instruktörer anses därför ha en viktig uppgift i att vägleda och stötta studenters genomförande av bedömnings- och återkopplingsaktiviteter, till exempel genom att förklara bedömningskriterier och ge återkoppling på studenternas återkoppling (t.ex. Carless & Boud, 2018; Evans, 2013; Taras, 2003). I den här avhandlingen riktas intresset mot hur studenters deltagande i formativa

återkopplingsaktiviteter och lärares instruktiva vägledning av sådana aktiviteter ser ut i praktiken.

Avhandlingen innehåller tre empiriska studier av simuleringsbaserad interprofessionell teamträning för läkar- och sjuksköterskestudenter[53]. I alla de undersökta utbildningsaktiviteterna var reflektion och återkoppling på studenternas prestationer centrala inslag. De träningsmoment som undersöks var obligatoriska inslag i läkar- och sjuksköterskeprogrammet vid två svenska universitet. Det huvudsakliga syftet med träningsmomenten var att ge de deltagande studenterna möjlighet att träna interprofessionellt teamarbete, det vill säga arbete i team som utgörs av personer från olika sjukvårdsprofessioner. Interprofessionell teamträning erbjuds idag av ett växande antal universitet, både i Sverige och i andra länder världen över (t.ex., Gough et al., 2012; Palaganas et al., 2014). Målet är att de studenter som deltar i träningen ska få en ökad förståelse för, och kunskaper om, andra professioners kunskaper och ansvarsområden och på så vis vara väl förberedda för sina framtida yrkespraktiker. På de universitet där den studerade simuleringsträningen genomfördes omfattade träningen även så kallade *icke-tekniska färdigheter* (eng. "non-technical skills") så som situationsmedvetenhet, beslutsfattande och effektiv kommunikation (Østergaard et al., 2011), vilka anses nödvändiga för ett väl fungerade teamarbete. Som stöd för utförandet av de icke-tekniska färdigheterna användes den så kallade CRM-modellen (Crisis Resource Management) vilken består av femton principer för hanteringar och utförande av viktiga moment av både enskilda individers och teamets gemensamma agerande.

Träning av teamarbete, både för studenter och professionella läkare och sjuksköterskor, genomförs i allt högre utsträckning i simuleringsbaserade miljöer. Detta eftersom simuleringsbaserad träning anses vara ett mer lättillgängligt, etiskt och säkert alternativ än träning med riktiga patienter (Eppich et al., 2011; Scalese, 2008). För träning av teamarbete används vanligtvis så kallade patientsimulatorer. Moderna patientsimulatorer är avancerade dockor i naturlig storlek som kan uppvisa ett stort antal kroppsliga funktioner och symptom, till exempel tal, hjärt- och lungljud, blödning, och svettning. Simuleringsövningar med patientsimulatorer genomförs vanligtvis i lokaler som är designade för att efterlikna autentiska kliniska miljöer. Övningarna inleds med en så kallad "briefing" då deltagarna får kortfattad information om patientfallet. Därefter följer

[53] Avhandlingens tredje delstudie vilken genomfördes i samarbete med forskare vid universitet i Norge och Storbritannien är ett undantag. Denna studie undersöker återkopplingsaktiviteter i två olika pedagogiska miljöer i syfte att generera resultat av en mer generaliserbar karaktär.

själva simuleringen ("scenariot") som kan liknas vid en rollspelsövning där deltagarna agerar som ett team som tar hand om en sjuk eller skadad patient. Övningen avslutas med en "debriefing" vilket är en uppföljningsdiskussion där deltagarna tillsammans diskuterar, reflekterar över, och ger återkoppling på sitt agerande i simuleringen under vägledning av en instruktör. I simuleringsträningssammanhang betraktas debriefingen som central för att förbättra deltagarnas lärande och framtida utövande av de färdigheter som tränas. I litteraturen betonas det att det är deltagarnas diskussioner om deras agerande i simuleringen som ska stå i fokus för debriefingen. Instruktören ska inta rollen av en så kallad facilitator som vägleder deltagarnas reflektioner, analyser och bedömningar av deras eget agerande snarare än att undervisa och ge kritisk återkoppling (t.ex., Fanning & Gaba, 2007; Steinwachs, 1992; Østergaard et al., 2011).

I forskningslitteraturen om simuleringsbaserad träning för sjukvårdsstudenter och professionella läkare och sjuksköterskor beskrivs ett antal pedagogiska modeller som är ämnade att utgöra ett stöd för facilitatorer som leder debriefing-samtal (se t.ex. Eppich & Cheng, 2015; Jaye, Thomas & Reedy, 2015; Kolbe et al., 2013; Phrampus & O'Donnell, 2013; Sawyer & Deering, 2013; Steinwachs, 1992; Zigmont, Kappus & Sudikoff, 2011). Flertalet av dessa modeller innehåller tydliga faser (t.ex. beskrivning, analys och användning) som var och en specificerar frågor som ska ställas till deltagarna. Frågorna är vanligtvis av öppen karaktär då detta anses inbjuda till självreflektion och självbedömning (Sawyer et al., 2016). Med utgångspunkt i deltagarnas svar på dessa frågor ska facilitatorn sedan ställa uppföljningsfrågor som främjar fördjupade diskussioner. Som nämnts tidigare ska facilitatorn i första hand agera som en samtalsledare, men i vissa fall anses det motiverat att facilitatorn ger återkoppling för att fylla kunskapsluckor hos deltagarna. I simuleringslitteraturen definieras återkoppling som enkelriktad information som tydliggör skillnaden mellan träningsdeltagarens agerande och en specifik standard i syfte att förbättra deltagarens framtida prestationer. Synen på återkoppling som enkelriktad information från en expert till en novis var tidigare dominerande även inom det pedagogiska forskningsfältet. Under senare år har detta synsätt emellertid förändrats och återkoppling förstås numera i allt högre utsträckning som en interaktiv process där mottagaren har en central roll (t.ex., Black & Wiliam, 2009; Boud & Molloy, 2013; Sadler, 1998).

Empiriska studier, syfte och frågeställningar

Den forskning som rapporteras i avhandlingen har genomförts inom ramen för ett större forskningsprojekt med titeln *Interprofessionellt lärande i simuleringsbaserad utbildning för hälso- och sjukvårdens professioner* (finansierat av Vetenskapsrådet 2013–2016). Det övergripande syftet med forskningsprojektet var att bidra med kunskaper om hur simuleringsbaserade lärandemiljöer kan stödja utbildning och träning av interprofessionell samverkan och teamarbete för studenter och yrkesverksamma inom sjukvården. Projektet byggde på ett samarbete mellan forskargrupper vid tre svenska universitet: Linköpings universitet, Karolinska institutet och Göteborgs universitet. Samtliga tre forskargrupper samlade in empiriskt material i form av videoinspelningar av simuleringsbaserad träning för studenter och/eller professionella läkare och sjuksköterskor. En del av materialet har använts som underlag för avhandlingens tre empiriska studier. Tillsammans syftar dessa studier till att ge en detaljerad bild av hur återkoppling och instruktivt arbete som stödjer återkoppling genomförs och organiseras i debriefing-samtal. Följande tre forskningsfrågor har varit vägledande för studierna:

1. Hur arbetar facilitatorerna för att stimulera och vägleda studenternas reflektion och återkoppling?
2. Hur är studenternas återkoppling interaktivt och sekventiellt organiserad?
3. Hur åberopas, aktualiseras och realiseras olika konceptuella modeller (t.ex. pedagogiska modeller för debriefing) i återkoppling och instruktivt arbete?

Teori och metod

Avhandlingen utgår från två olika men samtidigt nära sammanflätade perspektiv med rötter inom sociologin: etnometodologi och konversationsanalys (Garfinkel, 1967; Sacks, 1992). Gemensamt för dessa perspektiv är ett intresse för hur socialt samspel etableras och upprätthålls av aktörerna i olika situationer, samt ett antagande om att den primära kunskapen om hur detta sker innehas av aktörerna själva. En central utgångspunkt för båda perspektiven är att nyckeln till forskarens tolkning och analys av vad som sker i de studerade situationerna – oavsett om det är vardagliga eller institutionella situationer – är en förståelse för de gemensamma "metoder" som aktörerna själva använder sig av för att utföra och förstå dessa aktiviteter snarare än en utgångspunkt i teorier. Liksom är fallet

med de flesta perspektiv finns det många olika inriktningar inom etnometodologi och konversationsanalys. Avhandlingen ansluter sig till ett fält av studier som är influerade av både etnometodologi och konversationsanalys och som riktar intresset mot hur instruktivt arbete är organiserat i olika pedagogiska sammanhang. Dessa studier är baserade på videoinspelat material vilket möjliggör detaljerade analyser av de studerade aktiviteterna. Av speciell relevans för avhandlingen är de studier som har undersökt återkopplingssamtal där studenter reflekterar över och ger formativ återkoppling på sitt eget och/eller andra studenters arbete eller prestationer.

Som nämnts ovan består det empiriska materialet för avhandlingen av videoinspelningar av simuleringsbaserad träning som genererades inom ramen för ett större forskningsprojekt. Inom projektet utarbetades gemensamma rutiner för att hantera juridiska, etiska och praktiska frågor som kan uppstå i samband med insamling, bearbetning och lagring av videobaserat forskningsmaterial. Analysmetoder valdes emellertid enskilt av respektive forskargrupp i projektet. Forskningen som rapporteras i avhandlingen genomfördes i nära samarbete med forskargruppen vid Göteborgs universitet. Detta innebär att såväl insamling, efterarbete och analys av det empiriska materialet har utförts i samråd med seniora forskare med gedigen erfarenhet av videobaserad forskning. Den tredje av avhandlingens delstudier genomfördes i samarbete med två forskare från Norge respektive Storbritannien. Som underlag för denna studie användes utöver videoinspelningar av simuleringsbaserad träning även inspelningar av återkopplingssamtal för elever på en gymnasieskola i Norge. Användningen av empiriskt material från två olika pedagogiska miljöer möjliggjorde jämförelser och kontraster av det undersökta fenomenet, vilket i sin tur gjorde det möjligt att dra slutsatser av mer generell karaktär.

Delstudierna och deras resultat

Den första delstudien undersöker användningen av video som ett instruktivt hjälpmedel i debriefing-samtalen för att främja självreflektion och återkoppling på studenternas eget agerande i simuleringsscenarierna. Syftet med studien är att visa hur videon i kombination med facilitatorernas instruktiva vägledning var avgörande för hur studenterna uppfattade och pratade om sitt eget agerande. Studien analyserar sekvenser som ägde rum efter det att facilitatorerna hade visat korta sekvenser av videoinspelningarna av de föregående simuleringsscenarierna och uppmanat studenterna att reflektera över och ge

återkoppling på teamarbetet och kommunikationen i de visade situationerna. De tre empiriska exemplen som presenteras i studien visar att studenternas kommentarer i hög grad var beroende av utformningen och den sekventiella positionen av facilitatorernas frågor. Frågorna var formulerade på ett sätt som riktade uppmärksamheten mot visuella aspekter av de situationer som visades på video (t.ex. "*Såg* ni nånting som ni tycker fungerar bra här?") och uppmanade till kontraster mellan studenternas ihågkomna upplevelser och situationernas visuella framträdande (t.ex. "Har du samma känsla efter att du har sett de?"; "åssså tittar vi på klippet"). Till följd av sådana frågor analyserade och kommenterade studenterna sitt agerande från ett observatörsperspektiv (t.ex. "Jag såg lugn ut"). I vissa fall omvärderade de även sina tidigare negativa upplevelser av situationerna baserat på hur de framstod i videoklippen ("ja tycker inte att den känslan [osäkerhet] speglas i klipp- asså man- de syns inte utåt"). I avsaknad av vägledande frågor från facilitatorerna tenderade studenterna att ta utgångspunkt i sina ihågkomna upplevelser av situationerna eller fokusera på aspekter som inte hade att göra med teamarbete och kommunikation. En slutsats av studien är att video i sig själv inte är tillräckligt för att främja fördjupade, objektiva reflektioner och kritiska analyser av deltagarnas eget agerande. För att detta ska uppnås är instruktiva frågor som hjälper till att rikta uppmärksamheten mot relevanta detaljer av agerandet i videoklippen av central betydelse.

I den andra delstudien riktas uppmärksamheten mot hur facilitatorerna och studenterna formulerar och levererar återkoppling på studenternas agerande i simuleringsövningarna. Mer specifikt undersöker studien vilka möjligheter facilitatorerna och studenterna har, med hänsyn till deras institutionella roller och tidigare kunskaper och erfarenheter, att ge återkoppling på simuleringsprestandan mot bakgrund av professionella normer och standarder. De tre exempel som presenteras i studien inleds med att en student ger kritisk återkoppling på en annan students agerande i den föregående simuleringsövningen. Studenternas återkoppling följs sedan upp och vidareutvecklas av en av en facilitator. Studien undersöker två forskningsfrågor: a) Vad är utmärkande för studenters kamratåterkoppling respektive facilitatorernas uppföljning av denna återkoppling?, och b) Vilka funktioner fyller facilitatorernas uppföljningar gentemot studenternas kamratåterkoppling?

I linje med resultaten från tidigare konversationsanalytisk forskning om återkoppling i högre utbildning och professionsutbildning (t.ex. Copland, 2010; 2011; Ekström, 2013) visar den aktuella studien att de interaktionella villkoren för att ge kritisk återkoppling såg olika ut för facilitatorerna och studenterna i

debriefing-samtalen. Facilitatorernas sätt att formulera och leverera återkoppling gav uttryck för deras mandat att bedöma, korrigera och ge råd om studenternas prestationer medan studenternas sätt att leverera kritisk kamratåterkoppling visade att de uppfattade det som en socialt problematisk aktivitet. Studien fokuserar emellertid inte enbart på interaktionella dimensioner av återkoppling utan även på facilitatorernas och studenternas möjligheter och förmågor att relatera simuleringsagerandet till yrkesspecifika standarder och resonemang och på så vis synliggöra relevansen för studenternas framtida yrkesutövning. Som framgår av studiens resultat fokuserade studenternas återkoppling på hur deras medstudenter hade utfört specifika handlingar i simuleringsövningarna och hur dessa handlingar kunde ha utförts istället. Facilitatorerna å sin sida använde studenternas agerande i simuleringsövningarna som utgångspunkt för att föreslå generella strategier och principer för hur studenterna skulle agera i framtida situationer av liknande karaktär. Genom att tydliggöra kopplingen mellan studenternas agerande i simuleringsövningarna och deras framtida yrkesutövande fyllde facilitatorernas uppföljningar en viktig instruktiv funktion, både i förhållande till studenternas förmåga att utöva och bedöma interprofessionellt teamarbete på ett professionellt sätt.

Den tredje delstudien undersöker ett rutinmässigt inslag i återkopplingssamtal mellan lärare/instruktörer och studenter: sekvenser där studenterna ombeds att bedöma sina egna prestationer. Tidigare konversationsanalytisk forskning har visat att självbedömning är en komplex aktivitet som begränsas av sociala normer. I linje med dessa normer undviker människor att prata om sina egna prestationer i positiva ordalag medan självkritik hanteras som mindre problematiskt (se t.ex. Pomerantz, 1978; Speer, 2012). Detta gäller både i vardagliga och institutionella sammanhang trots att självbedömningar ofta är ett förväntat och efterfrågat inslag i det sistnämnda sammanhanget (t.ex. Copland, 2010; Waring, 2014).

Medan de första två delstudierna studerar återkoppling och instruktiv vägledning i ett och samma utbildningssammanhang, det vill säga debriefing, utgår den tredje studien från empiriska fall från två olika utbildningsmiljöer: debriefing-samtal för läkar- och sjuksköterskestudenter vid ett svenskt universitet och återkopplingssamtal för elever vid en norsk gymnasieskola. Syftet är att undersöka om och hur den undersökta aktiviteten, det vill säga lärar-initierade självbedömningar, påverkas av kontexten. Studien analyserar sekvenser i vilka facilitatorerna/lärarna, genom att ställa öppna frågor, omber studenterna att bedöma sitt eget agerande i de föregående simuleringsscenarierna respektive

muntliga presentationerna. Facilitatorernas/lärarnas frågor var av tre olika typer: 1) positivt vinklade frågor (t.ex. "vad gjorde du som va bra Bella?), 2) "neutrala" frågor (t.ex. "hur tycker du själv att det gick?"), och 3) negativt vinklade frågor (t.ex. "e de nånting du skulle ha gjort annorlunda?"). De exempel som presenteras i studien visar att studenterna ofta hade svårigheter att besvara frågorna, speciellt de som var positivt vinklade eller "neutrala". De positivt vinklade frågorna, vilka ställdes i debriefing-samtalen, bemöttes med tveksamma och fördröjda svar som var i linje med de sociala normer för självbedömning som har identifierats i tidigare forskning. Trots att frågorna uppmanade till positiva bedömningar av det *egna* agerandet ("va gjorde *du* som va bra") undvek studenterna aktivt att ge sådana svar, till exempel genom att istället bedöma gruppens gemensamma agerande (t.ex. "ja tyckte ändå ja å Rebecka hade ganska bra kommunikation"). De "neutrala" frågorna, vilka ställdes i återkopplingssamtalen för de norska gymnasieeleverna, besvarades med kortfattade "helt okej-svar" (t.ex. "de gick helt okej") som åtföljdes av förklaringar vilka bidrog till att rättfärdiga de bedömda prestationerna eller framställa dem som oväntade/överraskande (t.ex. "ja har varit sjuk så ja har liksom- ja har inte förberett mej så mycke"; "de gick bättre än väntat"). Vad gäller de negativt vinklade frågorna, vilka ställdes i debriefing-samtalen, besvarades de med direkta och öppet kritiska självbedömningar vilket tydde på att studenterna uppfattade självkritik som mindre socialt problematiskt än positiva självbedömningar (t.ex. "ja skulle rapporterat mycke bättre till dej enligt SBAR när du kom in för de gjorde ja inte de va väldigt dåligt"). Sociala normer för självbedömning var emellertid inte den enda orsaken till studenternas svårigheter att besvara frågorna. Analysen tyder på att även frågornas öppna karaktär och skillnaderna i kunskap, erfarenhet och institutionella positioner hos facilitatorer/lärare och studenter bidrog. Även om frågornas utformning signalerade att de efterfrågade studenternas reflektioner och åsikter behandlade studenterna dem som "testfrågor" för vilka det fanns på förhand kända eller föredragna svar. Facilitatorernas/lärarnas sätt att bemöta studenternas svar bekräftade snarare än dementerade denna förståelse; studenternas svar bemöttes som demonstrationer av deras kunskaper snarare än fria reflektioner och åsikter. Sammanfattningsvis demonstrerar studien hur sociala normer och epistemiska och institutionella asymmetrier verkar i självbedömningsaktiviteter. Resultaten visar att det finns en skiljaktighet mellan de strategier för att främja självbedömning som förespråkas i den pedagogiska litteraturen och sättet på vilket sådana aktiviteter är organiserade i praktiken: i teorin är öppna frågor en effektiv metod för att främja självreflektion och

självbedömning, men i praktiken kan sådana frågor snarare ha en hämmande effekt. En pedagogisk implikation är att lärare/instruktörer som tar utgångspunkt i modeller och principer ämnade att stödja självbedömningsaktiviteter också bör ta hänsyn till sociala, epistemiska och interaktiva förhållanden som uppstår i stunden, allteftersom aktiviteterna fortgår.

Diskussion och slutsatser

Som framgår i introduktionen är avhandlingens övergripande syfte att ge en detaljerad bild av hur formativ återkoppling och instruktivt arbete som vägleder sådan återkoppling genomförs och organiseras i praktiken i debriefing-samtal för läkar- och sjuksköterskestudenter. Avhandlingens empiriska studier undersöker olika fenomen, men samtliga tre studier behandlar tre övergripande teman: 1) facilitatorernas instruktiva vägledning, 2) sättet på vilket studenternas bidrag till diskussionerna är organiserade, och 3) den praktiska tillämpningen av modeller och principer för "god praxis".

Facilitatorernas instruktiva vägledning

I litteraturen om metoder för debriefing råder det enighet om att facilitatorernas instruktiva vägledning är viktig för att främja reflektion och lärande av de färdigheter som studenterna tränar i simuleringsövningarna. Det betonas samtidigt att facilitatorns uppgift är att agera som en samtalsledare snarare än en traditionell lärare/instruktör. Rollen som samtalsledare innebär att ställa inledande öppna frågor och uppföljningsfrågor som inbjuder till reflektion, kritisk analys och bedömning av studenternas agerande i simuleringsövningarna. Om studenternas svar tyder på att de har bristfälliga kunskaper om de uppgifter och färdigheter som tränas anses det motiverat att facilitatorn ger återkoppling som syftar till att fylla dessa kunskapsluckor.

Avhandlingens studier visar att de undersökta debriefing-samtalen var strukturerade i enlighet med pedagogiska metoder, modeller och principer som föreskrivs i litteraturen om debriefing. På ett av de två simuleringsträningscentra som studerades använde facilitatorerna en pedagogisk modell som inkluderade tre faser (beskrivning, analys och användning) och ett antal fördefinierade frågor (t.ex. "vad fungerade bra?") som skulle ställas till studenterna. Facilitatorerna på det andra centrat tillämpade ingen sådan modell, men samtalen var tydligt influerade av vissa principer som föreskrivs i litteraturen, till exempel användning av öppna frågor. Medan litteraturen om debriefing beskriver hur

pedagogiska modeller och principer är *avsedda att fungera* ger avhandlings delstudier en detaljerad bild av hur de *faktiskt fungerar*. Två av delstudierna (Studie 1 och Studie 3) undersöker hur de fördefinierade frågorna som specificerades av debriefing-modellen omsattes i praktiken av facilitatorerna. Resultaten visar att små variationer i facilitatorernas muntliga formuleringar av frågorna och sammanhanget i vilket frågorna ställdes hade stor betydelse för hur de förstods och besvarades av studenterna. Frågor som ställdes efter visningen av video-klipp och var formulerade i termer av "seende" (t.ex. *såg* ni något som fungerade bra) visade sig till exempel vara avgörande för att rikta studenternas uppmärksamhet mot hur deras teamarbete framstod ur ett observatörsperspektiv. Följaktligen utgjorde modellen en bas för facilitatorernas instruktiva frågor, men många av de detaljer som var avgörande för frågornas utfall fanns inte beskrivna i modellen.

Facilitatorernas instruktiva vägledning utgjordes inte enbart av frågor. Som framgår av avhandlingens andra delstudie fyllde återkoppling från facilitatorerna en viktig instruktiv funktion. Resultaten av denna studie bidrar till att nyansera den beskrivning av återkoppling som ges i simuleringslitteraturen: som ett inslag i de undersökta debriefing-samtalen var återkoppling en produkt av det interaktiva samspelet mellan facilitatorer och studenter snarare än enkelriktad information utformad för att tydliggöra skillnaden mellan studenternas prestationer och en specifik standard. Avhandlingens andra delstudie, liksom övriga två studier, visar också att det framskrivna idealet av facilitatorn som en "samtalsguide" eller "medlärande" inte återspeglades i den faktiska praktiken. Sättet på vilket facilitatorerna agerade i debriefing-samtalen positionerade dem som traditionella lärare/instruktörer med större kunskaper om de färdigheter som tränades och med mandat att kontrollera samtalens agenda. Detta innebar emellertid inte att de dominerade samtalen; samtliga facilitatorer betonade att diskussionerna skulle utgå från studenternas reflektioner och tankar om deras agerande i simuleringsövningarna.

Studenternas bidrag till diskussionerna

Avhandlingens tre studier visar att både självbedömning och kamratbedömning var förenade med svårigheter, både av interaktionell och innehållslig karaktär. Studenternas bedömningar av det egna agerandet var organiserade i enlighet med sociala normer för självbedömning vilket innebar att självkritik framfördes på ett rättframt sätt medan positiva självbedömningar undveks i möjligaste mån.

I de fall då positiva självbedömningar tillhandahölls var de vanligtvis nedtonade och rättfärdigade. Även studenternas sätt att ge återkoppling på varandras agerande visade på en orientering mot sociala normer: positiv kamratåterkoppling framfördes och mottogs på ett sätt som visade att den uppfattades som socialt oproblematisk medan kritisk kamratåterkoppling behandlades som en socialt obekväm företeelse, både av de studenter som levererade och mottog återkopplingen. Liknande resultat har påvisats i tidigare studier av återkopplingssamtal för studenter trots uttalade förväntningarna på själv- och kamratbedömning. Copland (2010, 2011, 2012) som har undersökt återkopplingssamtal för lärarstudenter menar att tänkbara förklaringar till detta är att studenterna varken förstår "spelets regler" eller har de kommunikativa och ämnesmässiga färdigheter som är nödvändiga för att kunna bedöma sitt eget och varandras agerande på ett adekvat sätt. Vissa av dessa svårigheter skulle enligt Copland kunna avhjälpas genom tydligare information om vad som förväntas av studenterna. Varken lärarstudenterna som deltog i de återkopplingssamtal som undersöktes av Copland eller studenterna som deltog i debriefing-samtalen som undersöks i den aktuella avhandlingen fick detaljerade instruktioner om de sociala dimensionerna av att ge och ta emot återkoppling. Snarare tycktes det förutsättas att studenterna redan var kompetenta i detta avseende, alternativt att facilitatorernas frågor var tillräckliga för att vägleda studenternas återkoppling.

Vad gäller den innehållsliga dimensionen av återkopplingen har tidigare studier (t.ex. Copland, 2010) visat att adekvat bedömning av andra studenters agerande kräver kunskaper om hur professionellt utövande av de färdigheter som tränas ser ut, liksom en förmåga att analysera andras agerande i realtid. Avhandlingens andra delstudie visar att studenterna tenderade att ta utgångspunkt i hur deras medstudenters agerande i simuleringsscenarierna påverkade dem personligen snarare än vilka konsekvenser agerandet fick för teamarbetet och kommunikationen. Då studenterna hade begränsade kunskaper om de färdigheter som tränades är dessa resultat föga förvånande, men icke desto mindre viktiga eftersom de understryker den centrala rollen av kompletterande återkoppling från facilitatorerna som tydliggör relationen mellan studenternas agerande i simuleringarna och deras framtida yrkespraktik.

Praktisk tillämpning av modeller och principer för "god praxis"

Det tredje temat som behandlas i avhandlingens delstudier handlar om hur konceptuella modeller för "god praxis" tillämpades i debriefing-samtalen. Ett syfte med simuleringsträningen var att ge studenterna möjlighet att träna på att tillämpa etablerade tekniker, modeller och algoritmer utformade för att stödja specifika moment av teamarbete och kommunikation, till exempel *SBAR-strukturen* och *ABCDE-sekvensen*. Dessa modeller kan liknas vid manualer som beskriver hur vissa moment av teamarbete och kommunikation ska utföras, så som strukturerade undersökningar av patienten och rapportering av patientens tillstånd till andra medlemmar i teamet. SBAR-strukturen till exempel, kan beskrivas som en stegvis manual för hur man rapporterar patientens tillstånd till annan sjukvårdspersonal. De fyra stegen av SBAR-strukturen, det vill säga *S*ituation, *B*akgrund, *A*ktuellt tillstånd och *R*apport, fanns beskrivna på ett minneskort som delades ut till studenterna vid de studerade träningstillfällena. För varje steg fanns det instruktioner om vad den som levererade rapporten skulle göra, till exempel ange sitt eget namn, titel, och enhet följt av patientens namn, ålder och personnummer. Även om sådana instruktioner kan verka väldigt tydliga och självförklarande har tidigare studier visat att det finns en inneboende öppenhet i instruktioner som är utformade för att kunna tillämpas av en bred målgrupp (se t.ex. Garfinkel, 1967, s. 18–24; Garfinkel, 2002). Som poängteras av Lindwall et al. (2015) måste sådana instruktioner alltid förstås i förhållande till och anpassas efter den specifika situation i vilken de ska tillämpas. Studenterna som deltog i simuleringsträningen behövde således förstå och anpassa modellerna för teamarbete och kommunikation till de situationer i scenarierna där de skulle tillämpas. Deras tillämpning av modellerna blev sedan ämne för gemensam diskussion och återkoppling i debriefing-samtalen. Studenterna påtalade ofta *att* de hade tillämpat modellerna, till exempel genom att säga att de hade genomfört undersökningen av patienten enligt ABCDE-sekvensen, men de återgav inte alltid *hur* detta hade gjorts. Även i detta avseende fyllde facilitatorernas återkoppling därför en viktig instruktiv funktion genom att tydliggöra relationen mellan konceptuella modeller för specifika moment av teamarbete och kommunikation och studenternas utförande av dessa moment i simuleringsscenarierna.

Slutsatser

Avhandlingen ger en detaljerad bild av hur formativ återkoppling går till i praktiken och vilka utmaningar sådana aktiviteter innebär för studenter och lärare/instruktörer. Resultaten understryker betydelsen av instruktiv vägledning från lärare/instruktörer, både avseende de sociala och innehållsmässiga dimensionerna av återkoppling.

References

Andrade, H., & Valtcheva, A. (2009). Promoting learning and achievement through self-assessment. *Theory Into Practice, 48*(1), 12-19.

Arminen, I. (2009). On comparative methodology in studies in social interaction. In M. Haakana, M. Laakso, & J. Lindström (Eds.), *Talk in interaction: Comparative dimensions* (pp. 48-69). Helsinki, Finland: Finnish Literature Society/SKS.

Asmuß, B. (2008). Performance appraisal interviews: Preference organization in assessment sequences. *The Journal of Business Communication, 45*(4), 408-429.

Atkinson, J. M., Heritage, J., & Oatley, K. (Eds.). (1984). *Structures of social action.* Cambridge: Cambridge University Press.

Bjørndal, C. R. P. (2016) *Konstruktive hjelpesamtaler. Mestringsfremmende perspektiver og redskaper i veiledning, rådgiving, mentoring og coaching.* Oslo, Norge: Gyldendal Akademisk.

Black, P., & Wiliam, D. (1998) Assessment and classroom learning, *Assessment in Education, 5*(1), 7–74.

Black, P., & Wiliam, D. (2009). Developing the theory of formative assessment. *Educational Assessment, Evaluation and Accountability*, *21*(1), 5-31.

Brackenreg, J. (2004). Issues in reflection and debriefing: How nurse educators structure experiential activities. *Nurse Education in Practice, 4*(4), 264-270.

Boet, S., Bould, M. D., Layat Burn, C., & Reeves, S. (2014). Twelve tips for a successful interprofessional team-based high-fidelity simulation education session. *Medical Teacher*, *36*(10), 853-857.

Bolden, G. B., & Robinson, J. D. (2011). Soliciting accounts with why-interrogatives in conversation. *Journal of Communication*, *61*(1), 94-119.

Borko, H., Koellner, K., Jacobs, J., & Seago, N. (2011). Using video representations of teaching in practice-based professional development programs. *ZDM, 43*(1), 175-187.

Boud, D. (1995). *Enhancing learning through self-assessment.* London: Kogan Page.

Boud, D., & Molloy, E. (2013). Rethinking models of feedback for learning: the challenge of design. *Assessment & Evaluation in Higher Education, 38*(6), 698-712

Broth, M., Cromdal, J., & Levin, L. (2018). Showing where you're going. Instructing the accountable use of the indicator in live traffic. *International Journal of Applied Linguistics*, *28*(2), 248-264.

Button, G. (2012). What does 'work' mean in 'ethnomethodological studies of work?': Its ubiquitous relevance for systems design to support action and interaction. *Design Studies*, *33*(6), 673-684.

Carless, D., & Boud, D. (2018). The development of student feedback literacy: enabling uptake of feedback. *Assessment & Evaluation in Higher Education*, *43*(8), 1315–1325.

Carless, D., Salter, D., Yang, M., & Lam, J. (2011). Developing sustainable feedback practices. *Studies in Higher Education*, *36*(4), 395-407.

Cazden, C. (2001). *Classroom discourse: The language of teaching and learning* (2nd ed.). Portsmouth, NH: Heinmann.

Cheng, A., Eppich, W., Grant, V., Sherbino, J., Zendejas, B., & Cook, D. A. (2014). Debriefing for technology-enhanced simulation: a systematic review and meta-analysis. *Medical Education*, *48*(7), 657-666.

Cheng, A., Morse, K. J., Rudolph, J., Arab, A. A., Runnacles, J., & Eppich, W. (2016). Learner-centered debriefing for health care simulation education: lessons for faculty development. *Simulation in Healthcare*, *11*(1), 32-40.

Chiniara, G., Cole, G., Brisbin, K., Huffman, D., Cragg, B., Lamacchia, M., & Norman, D. (2013). Simulation in healthcare: A taxonomy and a conceptual framework for instructional design and media selection. *Medical Teacher, 35*(8), e1380-e1395.

Chronister, C., & Brown, D. (2012). Comparison of simulation debriefing methods. *Clinical Simulation in Nursing*, *8*(7), e281-e288.

Clayman, S. E. (2013). Turn-constructional units and the transition-relevance place. In T. Stivers & J. Sidnell (Eds.), *The handbook of conversation analysis* (pp. 150-166). Oxford: Wiley Black.

Copland, F. (2010). Causes of tension in post-observation feedback in pre-service teacher training: An alternative view. *Teaching and Teacher Education*, *26*(3), 466-472.

Copland, F. (2011). Negotiating face in feedback conferences: A linguistic ethnographic analysis. *Journal of Pragmatics*, *43*(15), 3832-3843.

Copland, F. (2012). Legitimate talk in feedback conferences. *Applied Linguistics*, *33*(1), 1-20.

Copland, F., Ma, G., & Mann, S. J. (2009). Reflecting in and on post-observation feedback in initial teacher training on certificate courses. *English Language Teacher Education and Development*, *12*, 14-23.

Corti, L., Van den Eynden, V., Bishop, L., & Woollard, M. (2014). Managing and sharing research data: a guide to good practice. Los Angeles: Sage.

De Stefani, E., & Gazin, A. D. (2014). Instructional sequences in driving lessons: Mobile participants and the temporal and sequential organization of actions. *Journal of Pragmatics*, *65*, 63-79.

Derry, S. J., Pea, R. D., Barron, B., Engle, R. A., Erickson, F., Goldman, R., & Sherin, B. L. (2010). Conducting video research in the learning sciences: Guidance on selection, analysis, technology, and ethics. *The Journal of the Learning Sciences*, *19*(1), 3-53.

Dochy, F. J. R. C., Segers, M., & Sluijsmans, D. (1999). The use of self-, peer and co-assessment in higher education: A review. *Studies in Higher education*, *24*(3), 331-350.

Dreifuerst, K. T. (2009). The essentials of debriefing in simulation learning: A concept analysis. *Nursing Education Perspectives*, *30*(2), 109-114.

Dreifuerst, K. T. (2012). Using debriefing for meaningful learning to foster development of clinical reasoning in simulation. *Journal of Nursing Education*, *51*(6), 326-333.

Dreifuerst, K. T. (2015). Getting started with debriefing for meaningful learning. *Clinical Simulation in Nursing*, *11*(5), 268-275.

Drew, P. (2005). Conversation analysis. In K. L. Fitch & R. E. Sanders (Eds.), *Handbook of language and social interaction* (pp. 71-102). Mahwah, NJ: Lawrence Erlbaum Associates.

Drew, P., & Heritage, J. (Eds.) (1992). *Talk at work: Interaction in institutional settings*. Cambridge: Cambridge University Press.

Dufrene, C., & Young, A. (2014). Successful debriefing – Best methods to achieve positive learning outcomes: A literature review. *Nurse Education Today*, *34*(3), 372-376.

Edwards, D., & Potter, J. (2017). Some uses of subject-side assessments. *Discourse Studies, 19*(5), 497-514.

Ekström, A. (2013). Epistemic positioning and frameworks for participation: Learning to assess objects of craft in teacher education. *Learning, Culture and Social Interaction*, *2*(4), 277–292.

Ekström, A., & Lindwall, O. (2014). To follow the materials: The detection, diagnosis and correction of mistakes in craft education. In M. Neville, P. Haddington, T. Heinemann, & M. Rauniomaa (Eds.), *Interacting with objects: Language, materiality and social activity* (pp. 227–247). Amsterdam: John Benjamins Publishing Company.

Eppich, W., & Cheng, A. (2015). Promoting excellence and reflective learning in simulation (PEARLS): development and rationale for a blended approach to health care simulation debriefing. *Simulation in Healthcare*, *10*(2), 106-115.

Eppich, W., Howard, V., Vozenilek, J., & Curran, I. (2011). Simulation-based team training in healthcare. *Simulation in Healthcare*, *6*(7), 14–19.

Eppich, W., Hunt, E. A., Duval-Arnould, J. M., Siddall, V. J., & Cheng, A. (2015). Structuring feedback and debriefing to achieve mastery learning goals. *Academic Medicine*, *90*(11), 1501-1508.

Erickson, F. (2007). Ways of seeing video: Towards a phenomenology of viewing minimally edited footage. In R. Goldman, R. Pea, S. Barron, & S. Derry (Eds.), *Video research in the learning sciences* (pp. 145–155). Mahwah: Lawrence Erlbaum Associate Publishers.

Evans, C. (2013). Making sense of assessment feedback in higher education. *Review of Educational Research*, *83*(1), 70-120.

Fanning, R. M., & Gaba, D. M. (2007). The role of debriefing in simulation-based learning. *Simulation in Healthcare*, *2*(2), 115-125.

Fanning, R. M., Goldhaber-Fiebert, S. N., Udani, A. D., & Gaba, D. M. (2013). Crisis resource management. In A. I. Levine, S. DeMaria, A. D. Schwartz, & A. J. Sim (Eds.), *The comprehensive textbook of healthcare simulation* (pp. 95-109). Springer, New York, NY.

Francis, D. & Hester, S. (2004). *An invitation to ethnomethodology: language, society and interaction*. London: Sage.

Fukkink, R. G., Trienekens, N., & Kramer, L. J. C. (2011). Video feedback in education and training: Putting learning in the picture. *Educational Psychology Review, 23*(1), 45-63.

Gall, M. D. (1970). The use of questions in teaching. *Review of Educational Research*, *40*(5), 707-721.

Gardner, Rod (2004). Conversation Analysis. In A. Davies & C. Elder (Eds.), *The Handbook of Applied Linguistics* (pp. 262-284). Oxford: Blackwell Publishers Inc.

Gardner, Roxane (2013a). Introduction to debriefing. *Seminars in Perinatology, 37*(3), 166-174.

Gardner, Rod (2013b). Conversation analysis in the classroom. In J. Sidnell & T. Stivers (Eds.), *The handbook of conversation analysis* (pp. 593-611). Chichester, UK: Wiley-Blackwell.

Garfinkel, H. (1967). *Studies in Ethnomethodology*. Englewood Cliffs, N.J.:Prentice-Hall.

Garfinkel, H., Lynch, M., & Livingston, E. (1981). The work of a discovering science constructed with materials from the optically discovered pulsar. *Philosophy of the Social Sciences, 11*(2), 131-158.

Garfinkel, H. (Ed.). (1986). *Ethomethodological studies of work*. London: Routledge & Kegan Paul.

Garfinkel, H. (2002) *Ethnomethodology's program: working out Durkheim's aphorism*. Lanham, Md.: Rowman & Littlefield.

Garfinkel, H., & Sacks, Harvey (1970). The formal properties of practical action. In J. McKinney & E. A. Tiryakian (Eds.), *Theoretical sociology* (pp. 337– 65). New York: Appleton-Crofts.

Garfinkel, H. & Sudnow, D. (2002). A study of the work of teaching undergraduate chemistry in lecture format. In H. Garfinkel (Ed.), *Ethnomethodology's program: working out Durkheim's aphorism* (pp. 219-244). Lanham, Md.: Rowman & Littlefield.

Gilbert, J., Yan, J., & Hoffman, S. (2010). A WHO Report: Framework for action on interprofessional education and collaborative practice. *Journal of Allied Health, 39*(3), 196-7.

Goode, D. (2007). *Playing with my dog Katie: an ethnomethodological study of dog-human interaction*. West Lafayette, Ind.: Purdue University Press.

Goodwin, C. (1981). *Conversational organization: Interaction between speakers and hearers*. New York: Academic Press.

Goodwin, C. (1986). Between and within: Alternative sequential treatments of continuers and assessments. *Human Studies*, *9*(2-3), 205-217.

Goodwin, C. (1994). Professional vision. *American Anthropologist*, *96*(3), 606-633.

Goodwin, C. (1995). Seeing in depth. *Social Studies of Science*, *25*(2), 237-274.

Goodwin, C. (1997). The blackness of black: Color categories as situated practice. In L. B. Resnick, R. Säljö, C. Pontecorvo & B. Burge (Eds.), *Discourse, tools, and reasoning: Essays on situated cognition* (pp. 111-140). Berlin: Springer.

Goodwin, C. (2000a). Action and embodiment within situated human interaction. *Journal of Pragmatics*, *32*(10), 1489-1522.

Goodwin, C. (2000b). Practices of Color Classification. *Mind, Culture, and Activity, 7*(1-2), 19-36.

Goodwin, C., & Goodwin, M. H. (1987). Concurrent operations on talk: Notes on the interactive organization of assessments. *IPrA Papers in Pragmatics, 1*(1), 1-54.

Goodwin, C., & Goodwin, M. H. (1996). Seeing as a situated activity: Formulating planes. In Y. Engeström & D. Middleton (Eds.), *Cognition and Communication at Work* (pp. 61–95). Cambridge: Cambridge University Press.

Goodwin, C., & Heritage, J. (1990). Conversation analysis. *Annual Review of Anthropology*, *19*(1), 283-307.

Gough, S., Hellaby, M., Jones, N., & MacKinnon, R. (2012). A review of undergraduate interprofessional simulation-based education (IPSE). *Collegian, 19*(3), 153-70.

Greatbatch, D. (1988). A turn-taking system for British news interviews. *Language in Society*, *17*(3), 401-430.

Haakana, M., Laakso, M., & Lindström, J. (Eds.) (2009a). *Talk in interaction: Comparative dimensions*. Helsinki, Finland: Finnish Literature Society.

Haakana, M., Laakso, M. & Lindström, J. (2009b). Introduction: comparative dimensions of talk in interaction. In M. Haakana, M. Laakso, & J. Lindström (Eds.), *Talk in interaction: Comparative dimensions* (pp. 15-47). Helsinki, Finland: Finnish Literature Society.

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, *77*(1), 81-112.

Hayashi, M. (2013). Turn allocation and turn sharing. In T. Stivers & J. Sidnell (Eds.), *The handbook of conversation analysis* (pp. 167–190). Oxford: Wiley Black.

Heath, C. (1986). *Body movement and speech in medical interaction*. Cambridge: Cambridge University Press.

Heath, C., Hindmarsh, J., & Luff, P. (2010). *Video in qualitative research. Analysing social interaction in everyday life*. Los Angeles: Sage.

Heath, C., Knoblauch, H., & Luff, P. (2000). Technology and social interaction: The emergence of 'workplace studies'. *British Journal of Sociology*, *51*(2), 299-320.

Heath, C. & Luff, P. (1992). Collaboration and control. Crisis management and multimedia technology in London underground line control rooms. *Computer Supported Cooperative Work (CSCW)*, *1*(1-2), 69-94.

Heap, J. L. (1985). Discourse in the production of classroom knowledge: Reading lessons. *Curriculum Inquiry*, *15*(3), 245-279.

Heritage, J. (1984). *Garfinkel and ethnomethodology*. Cambridge: Polity.

Heritage, J. (2005). Conversation analysis and institutional talk. In K. L. Fitch & R. E. Sanders (Eds.), *Handbook of Language and social interaction* (pp. 103- 147). Mahwah, NJ: Lawrence Erlbaum Associates.

Heritage, J. (2009). Conversation analysis as social theory. In B. S. Turner (Ed.), *The new Blackwell companion to social theory* (pp. 300-320). ([New] ed.) Chichester: Wiley-Blackwell.

Heritage, J. (2012a). The epistemic engine: Sequence organization and territories of knowledge. *Research on Language and Social Interaction, 45*(1), 30-52.

Heritage, J. (2012b). Epistemics in action: Action formation and territories of knowledge. *Research on Language and Social Interaction*, *45*(1), 1-29.

Heritage, J. (2013). Epistemics in conversation. In T. Stivers & J. Sidnell (Eds.), *The handbook of conversation analysis* (pp. 370-394). Oxford: Wiley Black.

Heritage, J., & Sefi, S. (1992). Dilemmas of advice: Aspects of the delivery and reception of advice in interactions between health visitors and first time mothers. In P. Drew, & J. Heritage (Eds.), *Talk at work: Interaction in institutional settings* (pp. 359-419). Cambridge, UK: Cambridge University Press.

Hester, S. & Francis, D. (2000a). *Local educational order: ethnomethodological studies of knowledge in action*. Amsterdam: John Benjamins Publishing Co.

Hester, S. & Francis, D. (2000b). Ethnomethodology, conversation analysis, and 'institutional talk'. *Text*, *20*(3), 391-413.

Hindmarsh, J. & Heath, C. (2000). Embodied reference: A study of deixis in workplace interaction. *Journal of Pragmatics*, *32*(12), 1855-1878.

Hindmarsh, J., Hyland, L., & Banerjee, A. (2014). Work to make simulation work: 'Realism', instructional correction and the body in training. *Discourse Studies*, *16*(2), 247-269.

Hindmarsh, J., & Llewellyn, N. (2010). Finding organisation in detail: Methodological orientations. In N. Llewellyn & J. Hindmarsh (Eds), *Organization, interaction and practice. Studies in ethnomethodology and conversation analysis* (pp. 24-46). Cambridge: Cambridge University Press.

Hindmarsh, J. & Pilnick, A. (2007). Knowing bodies at work: Embodiment and ephemeral teamwork in anaesthesia. *Organization Studies*, *28*(9), 1395-1416.

Hindmarsh, J., Reynolds, P., & Dunne, S. (2009). Exhibiting understanding: The body in apprenticeship. *Journal of Pragmatics*, *43*(2), 489-503.

Hontvedt, M., & Arnseth, H. C. (2013). On the bridge to learn: Analysing the social organization of nautical instruction in a ship simulator. *International Journal of Computer-Supported Collaborative Learning*, *8*(1), 89-112.

Hutchby, I. (1995). Aspects of recipient design in expert advice-giving on call-in radio. *Discourse Processes*, *19*(2), 219-238.

Issenberg, B. S., Mcgaghie, W. C., Petrusa, E. R., Lee, G. D., Scalese, R. J. (2005). Features and uses of high-fidelity medical simulations that leads to effective learning: a BEME systematic review. *Medical Teacher, 27*(1), 10-28.

Issenberg, B. S. & Scalese, R. J. (2008). Simulation in healthcare education. *Perspectives in Biology and Medicine*, *51*(1), 31-46.

Jacoby, S. & Gonzales, P. (2002). Saying what wasn't said: Negative observation as a linguistic resource for the interactional achievement of performance feedback. In C. Ford, B. A. Fox & S. Thompson (Eds.), *The language of turn and sequence* (pp. 123-164). Oxford: Oxford University Press.

Jaye, P., Thomas, L., & Reedy, G. (2015). 'The Diamond': a structure for simulation debrief. *The Clinical Teacher*, *12*(3), 171-175.

Jefferson, G. (1987). On exposed and embedded correction in conversation. In G. Button & J. R. E. Lee (Eds.), *Talk and social organisation* (pp. 86–100). Clevedon, UK: Multilingual Matters.

Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In . G. H. Lerner (Ed.), *Conversation analysis: studies from the first generation* (pp. 13-31). Amsterdam: John Benjamins.

Jefferson, G., & Lee, J. R. (1981). The rejection of advice: Managing the problematic convergence of a 'troubles-telling' and a 'service encounter'. *Journal of Pragmatics*, *5*(5), 399-422.

Jirotk, M., Luff, P., & Heath, C. (1993). Requirements for technology in complex environments: Tasks and interaction in a city dealing room. *ACM SIGOIS Bulletin, 14*(2), 17-23.

Kawatoko, Y. (2000). Organizing multiple vision. *Mind, Culture, and Activity*, *7*(1-2), 37-58.

Keevallik, L. (2010). Bodily quoting in dance correction. *Research on Language and Social Interaction*, *43*(4), 401-426.

Kim, Y., & Silver, R. E. (2016). Provoking reflective thinking in post observation conversations. *Journal of Teacher Education*, *67*(3), 203–219.

Kinnell, A. M. K. (2002). Soliciting client questions in HIV prevention and test counseling. *Research on Language and Social Interaction*, *35*(3), 367-393.

Kinnell, A. M. K., & Maynard, D. W. (1996). The delivery and receipt of safer sex advice in pretest counseling sessions for HIV and AIDS. *Journal of Contemporary Ethnography*, *24*(4), 405-437.

Kitzinger, C. (2000). Doing feminist conversation analysis. *Feminism & Psychology*, *10*(2), 163-193.

Kitzinger, C. (2013). Repair. In T. Stivers & J. Sidnell (Eds.), *The handbook of conversation analysis* (pp. 229-256). Oxford: Wiley Black.

Knoblauch, H., Schnettler, B., Raab, J., & Soeffner, H. (Eds.) (2006). *Video analysis: methodology and methods : qualitative audiovisual data analysis in sociology*. Frankfurt am Main: P. Lang.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.

Kolbe, M., Weiss, M., Grote, G., Knauth, A., Dambach, M., Spahn, D. R., & Grande, B. (2013). TeamGAINS: a tool for structured debriefings for simulation-based team trainings. *BMJ Quality & Safety, 22*(7), 541-553.

Koshik, I. (2002). A conversation analytic study of yes/no questions which convey reversed polarity assertions. *Journal of Pragmatics*, *34*(12), 1851-1877.

Koshik, I. A. (2010). Questions that convey information in teacher-student conferences. In A. Freed & S. Erlich (Eds.), *Why do you ask?: The function of questions in institutional discourse* (pp. 1-44). New York: Oxford University Press.

Lauvås, P., & Handal, G. (2014). *Veiledning og praktisk yrkesteori*. Oslo, Norway: Cappelen Damm akademisk.

Lederman, L. C. (1992). Debriefing: Toward a systematic assessment of theory and practice. *Simulation & Gaming*, *23*(2), 145–160.

Lee, Y. A. (2006). Respecifying display questions: Interactional resources for language teaching. *TESOL Quarterly*, *40*(4), 691-713.

Lee, Y. A. (2007). Third turn position in teacher talk: Contingency and the work of teaching. *Journal of Pragmatics*, *39*(6), 1204-1230.

Lerner, G. H. (1993). Collectivities in action: Establishing the relevance of conjoined participation in conversation. *Text - Interdisciplinary Journal for the Study of Discourse*, *13*(2), 213-246.

Lerner, G. H. (2003). Selecting next speaker: The context-sensitive operation of a context-free organization. *Language in Society*, *32*(2), 177-201.

Lerner, G. H. (2004). *Conversation analysis: Studies from the first generation*. Philadelphia: John Benjamins.

Levin, L., Cromdal, J., Broth, M., Gazin, A., Haddington, P., McIlvenny, P., Melander, H., & Raunioma, M. (2017). Unpacking corrections in mobile instruction: Error-occasioned learning opportunities in driving, cycling and aviation training. *Linguistics and Education, 38*, 11-23.

Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. In Norman K. Denzin & Yvonna S. Lincoln (Eds.). *The SAGE handbook of qualitative research*. Thousand Oaks, CA: Sage Publications, Inc.

Lindwall, O. & Ekström, A. (2012). Instruction-in-interaction: The teaching and learning of a manual skill. *Human Studies*, *35*(1), 27-49.

Lindwall, O., Johansson, E., Rystedt, H., Ivarsson, J., & Reit, C. (2014). The use of video in dental education: Clinical reality addressed as practical matters of production, interpretation and instruction. In M. Broth, E. Laurier & L. Mondada (Eds.), *Video at work. Praxeological studies of media production* (pp. 161-180). New York: Routledge.

Lindwall, O & Lymer, G. (2014). Inquiries of the body: Novice questions and the instructable observability of endodontic scenes. *Discourse Studies*, *16*(2), 271-294.

Lindwall, O., Lymer, G., & Greiffenhagen, C. (2015). The sequential analysis of instruction. In N. Markee (Ed.), *The handbook of classroom discourse and interaction* (pp. 142-157). New York: John Wiley.

Liu, N. F., & Carless, D. (2006). Peer feedback: the learning element of peer assessment. *Teaching in Higher education*, *11*(3), 279-290.

Livingston, E. (1986). *The Ethnomethodological Foundations of Mathematics*. London: Routledge and Kegan Paul.

Livingston, E. (1987). *Making sense of ethnomethodology*. London: Routledge.

Llewellyn, N. (2014). Garfinkel and ethnomethodology. In P.S. Adler, P. du Gay, G. Morgan, & M. Reed (Eds.) *Oxford handbook of sociology, social theory and organization studies: contemporary currents* (pp. 299-317). Oxford: Oxford University Press.

Luff, P., Hindmarsh, J., & Heath, C. (Eds.). (2000). *Workplace studies: Recovering work practice and informing system design*. Cambridge, UK: Cambridge University Press.

Lymer, G. (2009). Demonstrating professional vision: The work of critique in architectural education. *Mind, Culture, and Activity*, *16*(2), 145-171.

Lymer, G. (2013). Assessing the realization of intention: The case of architectural education. *Human Studies*, *36*(4), 533-563.

Lynch, M. (1993). *Scientific practice and ordinary action: ethnomethodology and social studies of science*. New York: Cambridge University Press.

Macbeth, D. (1990). Classroom order as practical action: The making and un-making of a quiet reproach. *British Journal of Sociology of Education, 11*(2), 189-214.

Macbeth, D. (1992). Classroom "floors": Material organizations as a course of affairs. *Qualitative Sociology*, *15*(2), 123-150.

Macbeth, D. (1994). Classroom encounters with the unspeakable – do you see, Danelle. *Discourse Processes*, *17*(2), 311-335

Macbeth, D. (2000). Classrooms as installations. Direct instruction in early grades. In S. Hester & D. W. Francis (Eds.), *Local educational order: ethnomethodological studies of knowledge in action* (pp. 21–72). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Macbeth, D. (2001). On "reflexivity" in qualitative research: Two readings, and a third. *Qualitative Inquiry*, *7*(1), 35-68.

Macbeth, D. (2003). Hugh Mehan's learning lessons reconsidered: On the differences between the naturalistic and critical analysis of classroom discourse. *American Educational Research Journal*, *40*(1), 239-280.

Macbeth, D. (2004). The relevance of repair for classroom correction. *Language in Society*, *33*(5), 703-736.

Margutti, P. & Drew, P. (2014). Positive evaluation of student answers in classroom instruction. *Language and Education*, *28*(5), 436–458.

Maynard, D. W. (2003). *Bad news, good news: Conversational order in everyday talk and clinical settings*. Chicago: University of Chicago Press.

Maynard, D. W., & Clayman, S. E. (1991). The diversity of ethnomethodology. *Annual Review of Sociology*, *17*(1), 385-418.

Maynard, D. W., & Clayman, S. E. (2003). Ethnomethodology and conversation analysis. In L. T. Reynolds & N. J. Herman-Kinney (Eds.), *Handbook of symbolic interactionism* (pp. 173-202). Walnut Creek, CA: AltaMira Press.

McGaghie, W. C., Issenberg, S. B., Petrusa, E. R., & Scalese, R. J. (2010). A critical review of simulation-based education research: 2003-2009. *Medical Education*, *44*(1), 50-63.

McHoul, A. (1978). The organizations of turns at formal talk in the classroom, *Language in Society*, *7*(2), 183-213.

McHoul, A. (1990). The organization of repair in classroom talk. *Language in Society*, *19*(3), 349-377.

Mehan, H. (1979a). *Learning lessons: social organisation in the classroom*. Cambridge MA: Harvard University Press.

Mehan, H. (1979b). 'What time is it, Denise?": Asking known information questions in classroom discourse. *Theory Into Practice*, *18*(4), 285-294.

Mondada, L. (2018). Multiple temporalities of language and body in interaction: challenges for transcribing multimodality. *Research on Language and Social Interaction*, *51*(1), 85-106.

Motola, I., Devine, L.A., Chung, H.S., Sullivan, J.E., Issenberg, S.B. (2013). Simulation in healthcare education: A best evidence practical guide. *Medical Teacher, 35*(10), 1511–30.

Neill, M. A., & Wotton, K. (2011). High-fidelity simulation debriefing in nursing education: A literature review. *Clinical Simulation in Nursing*, *7*(5), e161-e168.

Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, *31*(2), 199-218.

Nyström, S., Dahlberg, J., Edelbring, S., Hult, H., & Dahlgren, M. A. (2016). Debriefing practices in interprofessional simulation with students: a sociomaterial perspective. *BMC medical education*, *16*(1), 148.

Palaganas, J. C., Epps, C., & Raemer, D. B. (2014). A history of simulation-enhanced interprofessional education. *Journal of Interprofessional Care*, *28*(2), 110-115.

Park, I. (2014). Stepwise advice negotiation in writing center peer tutoring. *Language and Education*, *28*(4), 362-382.

Park, I. (2017). Questioning as advice resistance: writing tutorial interactions with L2 writers. *Classroom Discourse*, *8*(3), 253-270.

Payne, G. (1976). Making a lesson happen: An ethnomethodological analysis. In M. Hammersley and P. Woods (Eds). *The process of schooling* (pp. 33-40). London: Routledge and Kegan Paul.

Payne, G., & Hustler, D. (1980). Teaching the class: The practical management of the cohort. *British Journal of Sociology and Education*, *1*(1), 49-66.

Payne, G. C. F., & Hustler, D. E. (1982). *Doing teaching.* London: Batesford Academic Press.

Peräkylä, A. (2011). Validity in research on naturally occurring social interaction. In D. Silvermann (Ed.), *Qualitative research: issues of theory, method and practice* (pp. 365-382). London: SAGE.

Peräkylä, A., & Vehviläinen, S. (2003). Conversation analysis and the professional stocks of interactional knowledge. *Discourse & Society, 14*(6), 727-750.

Phillabaum, S. (2005). Calibrating photographic vision through multiple semiotic resources. *Semiotica, 156*, 147-175.

Phrampus, P. E., & O'Donnell, J. M. (2013). Debriefing using a structured and supported approach. In A. I. Levine, S. DeMaria, A. D. Schwartz & A. J. Sim (Eds.), *The comprehensive textbook of healthcare simulation* (pp. 73-84). New York: Springer.

Pomerantz, A. (1978). Compliment responses: Notes on the co-operation of multiple constraints. In J. Schenkein (Ed.), *Studies in the organization of conversational interaction* (pp. 79–112). New York: Academic Press.

Pomerantz, A. (1984). Agreeing and disagreeing with assessments: Some features of preferred and dispreferred turn shapes. In J. M. Atkinson & J. Heritage (Eds.), *Structures of social action* (pp. 57–101). Cambridge: Cambridge University Press.

Pomerantz, A. & Heritage, J. (2013). Preference. In T. Stivers & J. Sidnell (Eds.), *The handbook of conversation analysis* (pp. 210–228). Oxford: Wiley Black.

Potter, J. & Edwards, D. (2013). Conversation analysis and psychology. In T. Stivers & J. Sidnell (Eds.), *The handbook of conversation analysis* (pp. 701-725). Oxford: Wiley Black.

Rawls, A. W. (2008). Harold Garfinkel, ethnomethodology and workplace studies. *Organization studies*, *29*(5), 701-732.

Reeves, S., Perrier, L., Goldman, J., Freeth, D., & Zwarenstein, M. (2013). Interprofessional education: effects on professional practice and healthcare outcomes. *Cochrane Database of systematic reviews*, *2013*(3), 1-47.

Rudolph, J. W., Simon, R., Dufresne, R. L., & Raemer, D. B. (2006). There's no such thing as "nonjudgmental" debriefing: a theory and method for debriefing with good judgment. *Simulation in Healthcare*, *1*(1), 49-55.

Rudolph, J. W., Simon, R., Raemer, D. B., & Eppich, W. J. (2008). Debriefing as formative assessment: closing performance gaps in medical education. *Academic Emergency Medicine*, *15*(11), 1010-1016.

Rystedt, H., & Sjöblom, B. (2012). Realism, authenticity, and learning in healthcare simulations: rules of relevance and irrelevance as interactive achievement. *Instructional Science, 40*(5), 785-798.

Sacks, H. (1984). Notes on methodology. In M. Atkinson and J. Heritage (Eds.), *Structures of social action: studies in conversation analysis* (pp. 21-27). Cambridge: Cambridge University Press.

Sacks, H. (1992). *Lectures on conversation*, vol. I & II. Edited by G. Jefferson with an introduction by E. A. Schegloff. Oxford: Basil Blackwell.

Sacks, H., Schegloff, E. A. & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language*, *50*(4), 696-735.

Sadler, D. R. (1989). Formative assessment and the design of instructional systems. *Instructional science*, *18*(2), 119-144.

Sadler, D. R. (1998). Formative assessment: Revisiting the territory. *Assessment in Education: Principles, Policy & Practice*, *5*(1), 77-84.

Savoldelli, G. L., Naik, V. N., Park, J., Joo, H. S., Chow, R., & Hamstra, S. J. (2006). Value of debriefing during simulated crisis management: Oral versus video-assisted oral feedback. *Anesthesiology: The Journal of the American Society of Anesthesiologists*, *105*(2), 279-285.

Sawyer, T., Eppich, W., Brett-Fleegler, M., Grant, V., & Cheng, A. (2016). More than one way to debrief: a critical review of healthcare simulation debriefing methods. *Simulation in Healthcare*, *11*(3), 209-217.

Sawyer, T. L., & Deering, S. (2013). Adaptation of the US Army's after-action review for simulation debriefing in healthcare. *Simulation in Healthcare*, *8*(6), 388-397.

Schegloff, E. (1992a). Introduction. In H. Sacks (Ed.), *Lectures on conversation* (Vol. 1, pp. ix–xii). Oxford, England: Blackwell.

Schegloff, E. (1992b). Repair after next turn: The last structurally provided defense of Intersubjectivity in conversation. *American Journal of Sociology, 97*(5), 1295-1345.

Schegloff, E. A. (1997). Practices and actions: Boundary cases of other-initiated repair. *Discourse Processes*, *23*(3), 499-545.

Schegloff, E. (2007). *Sequence organization in interaction. A primer in Conversation Analysis: Vol. 1*. Cambridge University Press.

Schegloff, E. A. (2009). One perspective on 'conversation analysis: comparative perspectives'. In J. Sidnell (Ed.), *Conversation analysis: comparative perspectives* (pp. 357-406). Cambridge University Press: Cambridge, UK.

Schegloff, E. A., Jefferson, G., & Sacks, H. (1977). The preference for self-correction in the organization of repair in conversation. *Language*, *53*(2), 361-382.

Schegloff, E. A., & Sacks, H. (1973). Opening up closings. *Semiotica*, *8*(4), 289-327.

Scott, M. B., & Lyman, S. M. (1968). Accounts. *American Sociological Review*, *33*, 46-62.

Searle, J., Kiefer, F. & Berwisch, M. (Eds.) (1980). *Speech act theory and pragmatics*. Dordrecht: Reidel.

Seedhouse, P. (2004). Conversation analysis methodology. *Language Learning, 54*(S1), 1-54.

Sellberg, C., & Lundin, M. (2018). Tasks and instructions on the simulated bridge: Discourses of temporality in maritime training. *Discourse Studies*, *20*(2), 289-305.

Sharrock, W. (1974). On owning knowledge. In R. Turner (Ed.), *Ethnomethodology: Selected readings* (pp. 45–53). Harmondsworth: Penguin.

Sidnell, J. (2010). *Conversation analysis: An introduction*. Chichester: Wiley-Blackwell.

Silverman, D. (1987). *Communication and medical practice: Social relations in the clinic*. London: Sage.

Sinclair, J. M. & Coulthard, M. (1975). *Towards an analysis of discourse: the English used by teachers and pupils*. London: Oxford U.P.

Skovholt, K., Nordenström, E., & Stokoe, E. (2019). Evaluative conduct in teacher-student supervision: When students assess their own performance. *Linguistics and Education*, *50*(4), 46-55.

Sluijsmans, D., & Prins, F. (2006). A conceptual framework for integrating peer assessment in teacher education. *Studies in Educational Evaluation, 32*(1), 6-22.

Speer, S. A. (2011). On the role of reported, third party compliments in passing as a "real" woman. In S. A. Speer & E. Stokoe (Eds.). *Conversation and gender* (pp. 155–182). Cambridge: Cambridge University Press.

Speer, S. A. (2012). The interactional organization of self-praise: Epistemics, preference organization, and implications for identity research. *Social Psychology Quarterly, 75*(1), 52–79.

Steinwachs, B. (1992). How to facilitate a debriefing. *Simulation & Gaming*, *23*(2), 186-195.

Stivers, T. (2013). Sequence organization. In T. Stivers & J. Sidnell (Eds.), *The handbook of conversation analysis* (pp. 191-209). Oxford: Wiley Black.

Stivers, T., Mondada, L., & Steensig, J. (2011). Knowledge, morality and affiliation in social interaction. In T. Stivers, L. Mondada & J. Steensig (Eds.), *The morality of knowledge in conversation* (pp. 3-24). Cambridge: Cambridge University Press.

Suchman, L. A. (1996). Constituting shared workspaces. In Y. Engeström & D. Middleton (Eds.), *Cognition and communication at work* (pp. 35–60). Cambridge: Cambridge University Press.

Sudnow, D. (1978). *Ways of the hand*. Cambridge, MA: Harvard University Press.

Sudnow, D. (1983). *Pilgrim in the Microworld*. New York: Warner Books.

Taras, M. (2003). To feedback or not to feedback in student self-assessment. *Assessment & Evaluation in Higher Education, 28*(5), 549-565.

Taras, M. (2008). Issues of power and equity in two models of self-assessment. *Teaching in Higher Education, 13*(1), 81–92.

ten Have, Paul (2002). Reflections on transcription. *Cahiers de Praxematique*, *39*, 21-43.

ten Have, P. (2004). *Understanding qualitative research and ethnomethodology*. London: Sage Publications.

ten Have, P. (2007). *Doing conversation analysis: a practical guide*. London: Sage Publications.

ten Have, P. (2013). Conversation analysis and ethnomethodology. In C. A. Chapelle (Ed.), *The encyclopedia of applied linguistics* (pp. 991-996). Oxford, UK: Wiley-Blackwell.

Timmis, C., & Speirs, K. (2015). Student perspectives on post-simulation debriefing. *The Clinical Teacher*, *12*(6), 418-422.

Topping, K. J. (2009). Peer assessment. *Theory into Practice*, *48*(1), 20-27.

Tsai, M. H. (2017). Negotiating power in L2 synchronous online peer response groups. *L2 Journal*, *9*(1), 21-38.

Tsai, M.-H., & Kinginger, C. (2015). Giving and receiving advice in computer-mediated peer response activities. *CALICO Journal*, *32*(1), 82–112.

Van De Ridder, J. M., Stokking, K. M., McGaghie, W. C., & Ten Cate, O. T. J. (2008). What is feedback in clinical education? *Medical Education*, *42*(2), 189-197.

Vehviläinen, S. (2001). Evaluative advice in educational counseling: The use of disagreement in the "stepwise entry" to advice. *Research on Language and Social Interaction*, *34*(3), 371-398.

Vehviläinen, S. (2009). Problems in the research problem: critical feedback and resistance in academic supervision. *Scandinavian Journal of Educational Research*, *53*(2), 185-201.

Waring, H. Z. (2005). Peer tutoring in a graduate writing centre: Identity, expertise, and advice resisting. *Applied Linguistics*, *26*(2), 141-168.

Waring, H. Z. (2007a). The multi-functionality of accounts in advice giving. *Journal of Sociolinguistics*, *11*(3), 367-391.

Waring, H. Z. (2007b). Complex advice acceptance as a resource for managing asymmetries. *Text & Talk*, *27*(1), 107-137.

Waring, H. Z. (2008). Using explicit positive assessment in the language classroom: IRF, feedback, and learning opportunities. *The Modern Language Journal*, *92*(4), 577-594.

Waring, H. Z. (2009). Moving out of IRF (Initiation-Response-Feedback): A single case analysis. *Language Learning*, *59*(4), 796-824.

Waring, H. Z. (2012). The advising sequence and its preference structures in graduate peer tutoring at an American university. In H. Limberg and M. A. Locher (Eds.), *Advice in discourse* (pp. 97-118). Amsterdam: John Benjamins.

Waring, H. Z. (2014). Mentor invitations for reflection in post-observation conferences: Some preliminary considerations. *Applied Linguistics Review, 5*(1), 99–123.

Waring, H. Z. (2017). Going general as a resource for doing advising in post-observation conferences in teacher training. *Journal of Pragmatics*, *110*, 20-33.

Watson, R. (1994). Harvey Sacks's sociology of mind in action. *Theory, Culture & Society*, *11*(4), 169-186.

Waxman, K. (2010). The development of evidence-based clinical simulation scenarios: Guidelines for nurse educators. *The Journal of Nursing Education, 49*(1), 29-35.

Waznonis, A. R. (2014). Methods and evaluations for simulation debriefing in nursing education. *Journal of Nursing Education*, *53*(8), 459-465.

Weeks, P. A. (1985). Error-correction techniques and sequences in instructional settings: Toward a comparative framework. *Human Studies*, *8*(3), 195-233.

Wiggins, S., & Potter, J. (2003). Attitudes and evaluative practices: Category vs. item and subjective vs. objective constructions in everyday food assessments. *British Journal of Social Psychology*, *42*(4), 513-531.

Wästerfors, D., Åkerström, M., & Jacobsson, K. (2014). Reanalysis of qualitative data. In U. Flick (Ed.), *The SAGE handbook of qualitative data analysis* (pp. 467-480). Los Angeles: Sage.

Zemel, A., & Koschmann, T. (2011). Pursuing a question: Reinitiating IRE sequences as a method of instruction. *Journal of Pragmatics*, *43*(2), 475-488.

Zhang, C., Thompson, S., & Miller, C. (2011). A review of simulation-based interprofessional education. *Clinical Simulation in Nursing*, *7*(4), e117-e126.

Zigmont, J., Kappus, L., & Sudikoff, S. (2011). The 3D model of debriefing: defusing, discovering, and deepening. *Seminars in Perinatology, 35*(2), 52-58.

Zimmerman, D. H. (1984). Talk and its occasion: The case of calling the police. In D. Schiffrin (Ed.), *Meaning, form and use in context: Linguistic applications* (pp. 210-228). Washington, DC.: Georgetown University Press.

Zottmann, J. M., Goeze, A., Frank, C., Zentner, U., Fischer, F., & Schrader, J. (2012). Fostering the analytical competency of pre-service teachers in a computer-supported case-based learning environment: A matter of perspective? *Interactive Learning Environments, 20*(6), 513–532.

Østergaard, D., Dieckmann, P., & Lippert, A. (2011). Simulation and CRM. *Best Practice & Research Clinical Anaesthesiology, 25*(2), 239-249.

Østergaard, H. T., Østergaard, D., & Lippert, A. (2008). Implementation of team training in medical education in Denmark. *Postgraduate Medical Journal*, *84*(996), 507-511.

Appendix

APPENDIX A: Consent form students, pilot study

2012-xx-xx

Till kursdeltagare vid [redacted]

Medgivande till medverkan i en pilotstudie om videoanvändning vid debriefing

Under de närmaste veckorna kommer en mindre studie att genomföras vid [redacted] För detta behöver vi kursdeltagarnas medgivande. Nedan följer en kort presentation av studien.

Studien genomförs inom ramen för LETStudio som är en tvärvetenskaplig satsning på forskning om lärande. LETStudio samordnas av Åsa Mäkitalo och har Göteborgs universitet som huvudman. Den här studien genomförs av en grupp forskare inom LETStudion: Elin Johansson, Oskar Lindwall och Hans Rystedt från den utbildningsvetenskapliga fakulteten.

Syftet med studien är att utveckla metoder för datainsamling (i huvudsak med video) samt att generera och specificera teman inför ett framtida, större samarbetsprojekt mellan tre svenska universitet. Samarbetsprojektet fokuserar på hur inspelningar från simuleringar kan användas för feedback i efterföljande debriefing. Under förutsättning att data blir av tillfredsställande kvalitet kommer data från pilotprojektet också att ingå i studier som publiceras. För själva pilotstudien är dock enbart Göteborgs universitet huvudman.

För att dokumentera och analysera simuleringsövningarna kommer vi dels att spara filmerna som spelas in under själva simuleringsscenariet, dels kommer vi att videofilma debriefingen. Vi kommer även att göra uppföljande intervjuer med instruktörer och kursdeltagare som kommer att videoinspelas. Inspelningarna kommer att användas enbart i forsknings- och utbildningssyfte. Vi vill betona att inspelningarna kommer att användas för analys av aktiviteterna och inte av enskilda personers prestationer.

Allt arbete inom projektet kommer att ske i enlighet med Personuppgiftslagen (1998:204)[54]. Inspelningar kommer att förvaras på sätt som innebär att obehöriga inte kan få tillgång till dem. De personer som medverkar på inspelningarna kommer att vara anonyma i den rapportering som kommer ut av projektet. Namn kommer att ändras till fiktiva namn i de texter som publiceras. Om bilder från videoinspelningarna används vid rapporteringar kommer även de att anonymiseras så att personerna inte är möjliga att känna igen.

Kontaktpersoner vid frågor eller funderingar:
Forskare: Hans Rystedt
031-786 2848, hans.rystedt@ped.gu.se
[redacted]
Projektassistent: Elin Johansson
031-786 2429, elin.johansson@ped.gu.se

[54] Personuppgiftsombud för Göteborg universitet är Kristina Ullgren. Kristina.Ullgren@adm.gu.se. Ansvarig för personuppgifterna är Göteborgs universitet

Underskrift av kursdeltagare

Deltagandet i videoinspelningarna är frivilligt och medverkande kan när som helst välja att avbryta sitt deltagande. Meddela i talongen nedan om du vill delta eller inte.

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Talongen besvaras senast den xxxx 2012

□ Ja, jag deltar i studien. Inspelningarna får användas i studien samt i universitetets utbildningar och forskning.

□ Nej, jag vill inte medverka i studien

Datum_____

Underskrift:_____

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APPENDIX B: Consent form instructors, pilot study

2012-xx-xx

Till instruktörer vid [redacted]

Medgivande till medverkan i en pilotstudie om videoanvändning vid debriefing

Under de närmaste veckorna kommer en mindre studie att genomföras vid [redacted]. För detta behöver vi medgivande från dig som instruktör. Nedan följer en kort presentation av studien.

Studien genomförs inom ramen för LETStudio som är en tvärvetenskaplig satsning på forskning om lärande. LETStudio samordnas av Åsa Mäkitalo och har Göteborgs universitet som huvudman. Den här studien genomförs av en grupp forskare inom LETStudion: Elin Johansson, Oskar Lindwall och Hans Rystedt från den utbildningsvetenskapliga fakulteten.

Syftet med studien är att utveckla metoder för datainsamling (i huvudsak med video) samt att generera och specificera teman inför ett framtida, större samarbetsprojekt mellan tre svenska universitet. Samarbetsprojektet fokuserar på hur inspelningar från simuleringar kan användas för feedback i efterföljande debriefing. Under förutsättning att data blir av tillfredsställande kvalitet kommer data från pilotprojektet också att ingå i studier som publiceras. För själva pilotstudien är dock enbart Göteborgs universitet huvudman.

För att dokumentera och analysera simuleringsövningarna kommer vi dels att spara filmerna som spelas in under själva simuleringsscenariet, dels kommer vi att videofilma debriefingen. Vi kommer även att göra uppföljande intervjuer med instruktörer och kursdeltagare som kommer att videoinspelas. Inspelningarna kommer att användas enbart i forsknings- och utbildningssyfte. Vi vill betona att inspelningarna kommer att användas för analys av aktiviteterna och inte av enskilda personers prestationer.

Allt arbete inom projektet kommer att ske i enlighet med Personuppgiftslagen (1998:204)[55]. Inspelningar kommer att förvaras på sätt som innebär att obehöriga inte kan få tillgång till dem. De personer som medverkar på inspelningarna kommer att vara anonyma i den rapportering som kommer ut av projektet. Namn kommer att ändras till fiktiva namn i de texter som publiceras. Om bilder från videoinspelningarna används vid rapporteringar kommer även de att anonymiseras så att personerna inte är möjliga att känna igen.

Kontaktpersoner vid frågor eller funderingar:
Forskare: Hans Rystedt
031-786 2848, hans.rystedt@ped.gu.se
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Projektassistent: Elin Johansson
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[55] Personuppgiftsombud för Göteborg universitet är Kristina Ullgren. Kristina.Ullgren@adm.gu.se. Ansvarig för personuppgifterna är Göteborgs universitet

Underskrift av instruktörer

Deltagandet i videoinspelningarna är frivilligt och medverkande kan när som helst välja att avbryta sitt deltagande. Meddela i talongen nedan om du vill delta eller inte.

_ _

Talongen besvaras senast den xxxx 2012

□ Ja, jag deltar i studien. Inspelningarna får användas i studien samt i universitetets utbildningar och forskning.

□ Nej, jag vill inte medverka i studien

Datum_____

Underskrift:_____

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APPENDIX C: Consent form students, research project

2013-xx-xx

Till kursdeltagare

Medgivande till medverkan i en studie om simulering och interprofessionellt lärande

Under 2013–2016 kommer ett forskningsprojekt att genomföras i samarbete mellan Linköpings universitet, Karolinska institutet och Göteborgs universitet. Nedan följer en kort presentation av projektet.

Projektets syfte är att utveckla kunskap om hur kompetenser för interprofessionellt teamarbete kan utvecklas med hjälp av simuleringar.

För att dokumentera och analysera simuleringsövningarna kommer vi att använda de sparade filmerna som spelas in som en ordinarie del av själva simuleringsövningen. Utöver detta kommer vi för projektet att videofilma introduktion till och uppföljningen av scenarierna (briefing och debriefing). Vi kommer även att göra uppföljande intervjuer med instruktörer och kursdeltagare som kommer att videoinspelas. Inspelningarna kommer att användas enbart i forskningssyfte och resultaten kommer att användas för att utveckla pedagogiken i simuleringsträning. Vi vill betona att inspelningarna kommer att användas för analys av aktiviteterna och inte av enskilda personers prestationer. För att kunna göra detta behöver vi ditt medgivande.

Allt arbete inom projektet kommer att ske i enlighet med Personuppgiftslagen (1998:204)[56]. Inspelningar kommer att förvaras på sätt som innebär att obehöriga inte kan få tillgång till dem. De personer som medverkar på inspelningarna kommer att vara anonyma i den rapportering som kommer ut av projektet. Namn kommer att ändras till fiktiva namn i de texter som publiceras. Om bilder från videoinspelningarna används vid rapporteringar kommer även de att anonymiseras så att personerna inte är möjliga att känna igen.

Kontaktpersoner vid frågor eller funderingar:

Linköpings universitet:
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Karolinska institutet:
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Göteborgs universitet:
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Underskrift av kursdeltagare

Deltagandet i videoinspelningarna är frivilligt och medverkande kan när som helst välja att avbryta sitt deltagande. Meddela i talongen nedan om du vill delta eller inte.

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□ Ja, jag deltar. Inspelningarna får användas i forskning

□ Nej, jag vill inte medverka i studien

Datum____

Underskrift:____________________________________

Namnförtydligande: ______________________________

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APPENDIX D: Consent form instructors, research project

2013-xx-xx

Till instruktörer/lärare

Medgivande till medverkan i en studie om simulering och interprofessionellt lärande

Under 2013–2016 kommer ett projekt att genomföras i samarbete mellan Linköpings universitet, Karolinska institutet och Göteborgs universitet. Nedan följer en kort presentation av projektet.

Projektets syfte är att utveckla kunskap om hur kompetenser för interprofessionellt teamarbete kan utvecklas med hjälp av simuleringar.

För att dokumentera och analysera simuleringsövningarna kommer vi att spara filmerna som spelas in som en ordinarie del av själva simuleringsövningen. Utöver detta kommer vi för projektet att videofilma introduktion till och uppföljningen av scenarierna (briefing och debriefing). Vi kommer även att göra uppföljande intervjuer med instruktörer och kursdeltagare som kommer att videoinspelas. Inspelningarna kommer att användas enbart i forskningssyfte. Resultaten kommer att användas för att utveckla pedagogiken i simuleringsträning. Vi vill betona att inspelningarna kommer att användas för analys av aktiviteterna och inte av enskilda personers prestationer. För att kunna göra detta behöver vi ditt medgivande.

Allt arbete inom projektet kommer att ske i enlighet med Personuppgiftslagen (1998:204)[57]. Inspelningar kommer att förvaras på sätt som innebär att obehöriga inte kan få tillgång till dem. De personer som medverkar på inspelningarna kommer att vara anonyma i den rapportering som kommer ut av projektet. Namn kommer att ändras till fiktiva namn i de texter som publiceras. Om bilder från videoinspelningarna används vid rapporteringar kommer även de att anonymiseras så att personerna inte är möjliga att känna igen.

Kontaktpersoner vid frågor eller funderingar:

Linköpings universitet:
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Göteborgs universitet:
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[57] Personuppgiftsombud för Linköpings universitet är Eli Hjort-Reksten, eli.hjort.reksten@liu.se.

Underskrift av instruktör/lärare

Deltagandet i videoinspelningarna är frivilligt och medverkande kan när som helst välja att avbryta sitt deltagande. Meddela i talongen nedan om du vill delta eller inte.

_ _

□ Ja, jag deltar. Inspelningarna får användas i forskning.

□ Nej, jag vill inte medverka i studien

Datum_____

Underskrift:_____

Namnförtydligande: _____

_ _

Part two: The studies