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Urquhart, L. M.; Ker, J. S.; Rees, C. E.

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Exploring the influence of context on feedback at medical school: A video-ethnography study

Urquhart LM,[1] Ker JS,[2] Rees CE[3]

1. Ninewells Hospital, Dundee, Scotland

2. NHS Education for Scotland, East Deanery, Ninewells Hospital, Dundee, Scotland

3. Faculty of Medicine, Nursing & Health Sciences, Monash University, Melbourne, Australia

Corresponding author: lynnurquhart@nhs.net

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Abstract

Feedback in medical education is complicated by the multiple contexts within which learning occurs. However, feedback research in medical education has typically focused on information provided by tutors to students with limited exploration of the influence of context. This research seeks to address this gap by exploring the influence of multiple contexts upon feedback processes. Employing video-ethnography methodology we explored feedback in two common contexts for medical student learning: the simulated clinical environment and the medical workplace. Learning and teaching sessions were filmed in each of these contexts, capturing diverse feedback processes. Data were analysed for key themes using a Framework Analysis approach and similarities and differences between the two contexts identified. In total 239 distinct feedback episodes across 28 different teaching and learning sessions were captured, with feedback processes relating to the patient, practice, educational and institutional contexts observed. In this paper, we concentrate on key similarities and differences in feedback processes between the two contexts with respect to six themes: feedback interlocutors, interlocutor positioning, feedback types, feedback foci, feedback styles and feedback milieu. We argue that feedback is inextricably linked to the multiple contexts in which feedback is enacted. It is only by exploring these contextual influences that feedback can be understood more fully. With such understanding we should be better placed to develop interventions capable of improving the long elusive experience of successful feedback.

Keywords: Context, Feedback, Video, Video-ethnography, Video-reflexive ethnography, Visual-ethnography, Undergraduate medical education

Introduction

It is universally understood (and demonstrated in key reviews) that feedback, when successful, is one of the most influential factors upon the learning process and the learner (Hattie and Timperley 2007; Kluger and De Nisi 1996; Shute 2008; Veloski et al. 2006). Feedback can, for example, influence learners positively through affective (e.g. increasing student motivation, effort and engagement) and cognitive processes (e.g. reducing students' cognitive load and restructuring information, beliefs and strategies: Hattie & Timperley 2007; Shute 2008). Furthermore, feedback is helpful for teachers since it allows them to evaluate how their teaching has translated into student learning and to tailor their teaching accordingly (Yorke 2003). However, although successful feedback is powerfully positive, a negative feedback experience can arguably have a more damaging legacy (Urquhart et al. 2014). In addition, in clinical medicine, unsuccessful or absent ("vanishing") feedback is not only a threat to the learner but may also threaten patient safety, as sub-standard knowledge or clinical skills, which go unchallenged, run the risk of persisting into practice (Ende 1983). In medical education, this need to provide successful feedback consistently is universally accepted, yet the goal remains elusive. Transcending undergraduate and postgraduate education, both parties in the feedback dialogue (provider and receiver) report remaining dissatisfied with feedback processes (GMC 2015; Unistats 2016; Urquhart et al. 2014). Indeed, this experience can be seen throughout higher education where tutors report feeling burdened by the ever-increasing volume of feedback expected, and learners persisting in their assertion that they are receiving feedback that is both lacking in quality and quantity (Crisp 2007; GMC 2015; Krause et al. 2005; Price et al. 2010; Unistats 2016; Urquhart et al. 2014).

In recognition of the problems with feedback within medical education (and indeed across higher education) researchers have sought to explore and implement means to improve feedback processes (Cantillon and Sargeant 2008; Eva et al 2012; Hewson and Little 1998; Pendleton 1984;

Sargeant 2011; Urquhart 2014; Watling 2013)[1]. Throughout the feedback literature, the methods employed to both explore and intervene have been informed by researchers' understandings of feedback (Thurlings et al. 2012). While the body of work around feedback is heterogeneous and extensive we think that most feedback research to date can be divided into three main categories: Feedback as tutor-delivered information (e.g. Pendleton 1984), feedback as student-centred phenomena (e.g. Eva 2012; Sargeant 2011) and feedback as socio-cultural phenomena (e.g. Urquhart 2015; Watling 2013). Indeed, it is important to understand these different categories of research because they differ extensively in relation to how much consideration they give to context.

Feedback as tutor-delivered information

To date, the vast majority of feedback research and subsequent educational interventions has been rooted in understanding feedback as tutor-delivered information. This conceptualisation is based upon a behaviourist understanding of feedback, which ultimately sees the learner controlled by the input of information (Mann 2011; Thurlings et al. 2012). As such, educational interventions emerging from this conceptualisation have focused upon the provision of guidelines for feedback providers, which have tended to live within a "paradigm of telling" (Boud and Molloy 2012). The rationale for this approach is that improving the quality of the "information" provided will ultimately improve the intended outcome within the learner i.e. an improvement in their knowledge, skills, behaviours or attitudes. However, this approach has done little to improve feedback. Despite the ready availability of many feedback guidelines for some time (Cantillon and Sargeant 2008; Dohrenwend 2002; Fanning and Gaba 2007; Hewson and Little 1998; Urquhart et al. 2014), feedback dissatisfaction persists. This is because learners do not simply "receive" feedback and utilise it unchanged as might be seen in a transmission model of communication (Ajjawi 2012; Ajjawi and Rees 2012). Providing information is no guarantee that the learner will have understood it or valued it. Indeed, feedback is

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[1] This is by no means an exhaustive list as the literature on feedback is vast but seeks to provide a few examples of differing perspectives in feedback.

received through "feedback filters" which are ultimately determined by the learner not the tutor (Eva et al 2012). It is only after the information has passed through these filters (such as the emotion of the learner, their perceptions of the credibility of the feedback provider, and learner perceptions of the quality of the student-teacher relationship) that this information may or may not transform into something that affects changes in practice.

Feedback as student-centred phenomena

In recognition of the flaws of a tutor-centred approach, some researchers have shifted towards a student-centred approach. This understanding is more in line with a transactional conceptualisation of communication, which is a dynamic process in which those involved receive and send information simultaneously and meanings are co-constructed (Ajjawi and Rees 2012). In this new wave, researchers have recognised the importance of students' influence upon feedback success and have sought to explore their perspectives on feedback processes. Subsequent research has found these influences to include, amongst others, self-esteem, emotion and regulatory focus (Eva et al. 2012; Sargeant et al. 2008; Urquhart et al. 2014; Van-Dijk and Kluger 2004). Whilst this student-based approach provides important insights into feedback, in many ways it has highlighted more questions than answers about feedback. For example, the student-centred research typically explores students' understandings and perspectives around feedback experiences and, in doing so, has uncovered the importance of feedback provider-learner relationships. Thus, feedback cannot be conceptualised solely as a give and receive transaction between two individuals but instead the outcome of any dialogue is ultimately influenced by the relationship between those two parties. For example, the perceived credibility of the feedback provider by the learner has been shown to have significant influence over whether feedback is valued and subsequently utilised by the learner (Watling et al. 2012a; Watling et al. 2012b).

Feedback as socio-cultural phenomena

We would argue that even research subscribing to a dialogic understanding of feedback fails to fully encapsulate all influences upon feedback success. Feedback is more than a conversation between two people; it "is never delivered or received in a vacuum" (Eva et al. 2012, p.17). There are likely to be factors external to the participants themselves, which ultimately influence the feedback dynamic. We would argue that feedback, and thus interventions to improve it, must be understood within the context within which feedback is delivered and received (Ajjawi, Molloy, Bearman and Rees, 2017). Context has been shown to be vital to feedback success in the wider literature outside medical education. For example, research has shown that people from individualist countries (i.e. the UK and USA) differ from those of collectivist countries (i.e. countries in Asia) in terms of the types of feedback they prefer, their intrinsic motivation, their willingness to seek feedback and in their goal setting (Brockner and Chen 1996; Gelfand et al. 2007; Sully De Luque and Sommer 2000; Van De Vliert et al. 2004). However, although the higher education, psychology and management literature have all been hugely influential in informing our understanding of feedback there are unique features of feedback within medical education, which ultimately mean that the challenges around feedback differs from each of these disciplines in a number of ways. Firstly, a significant amount of learning occurs within the workplace, where tutors are clinicians who, in the majority of cases, have no formal training in pedagogy (Schofield et al. 2009). Secondly, teaching and learning occurs in multiple different sites, for example, the classroom, simulated environment and the medical workplace and each of these contexts might pose their own challenges in terms of successful feedback (Ajjawi et al. 2017). Finally, and most importantly, rather than the learner being the only beneficiary of any feedback, it is patient safety that remains central in the quest to improve feedback to learners.

The importance of context in feedback

There has been limited exploration of contextual influences in feedback processes within the medical education literature to date. One example of culturally-situated feedback influences comes from the work of Watling et al. (2013), which demonstrates that medical students are unique (when compared to two other higher education disciplines) in attributing perceived credibility, not to the teaching skill of the feedback provider but instead to the perceived skill of that party as a clinician. Indeed, it is these informal and hidden curricular influences that have remained, for the most part, unexplored when it comes to feedback in medical education (Hafferty, 1998). Perhaps this lack of contextually-situated research is because "context" has, to date, remained poorly defined, and its influence not understood within medical education (Ajjawi et al.2017). Context has recently been likened to "dark matter", i.e. something that is hard to see (Bates and Ellaway 2016, p.808). Bates and Ellaway argue that context is: "visible only through investigation of their profound influence on our programs, our teaching, our students' and trainees' learning, and their eventual practice" (Bates and Ellaway, 2016, p.808). The authors reflect that within medical education, different training sites "intrinsically afford different types of informal learning" (Bates and Ellaway, 2016, p.808). Perhaps this might be one of the greatest criticisms of the feedback in medical education literature to date. Reflecting the medical (objectivist) "need to fix" paradigm, interventions to improve feedback in medical education have been developed within one context and applied liberally across many different contexts with unsurprisingly mixed results (Crotty 1998).

Exploring context through visual methodologies

One means through which context can be explored is through the use of visual methodologies such as video-ethnography. Visual methodologies provide a rich source of data when exploring learning from a constructionist viewpoint, whereby meaning is constructed by humans through their engagement with the world (Crotty 1998). Visual methodologies, such as video ethnography and video-reflexive ethnography, are rooted in anthropological methodologies, such as traditional

ethnography, which sees researchers immersed within the field, studying social interactions, behaviours and perceptions that may occur within teams or organisations (Hammersley and Atkinson 2007; Reeves et al. 2008). Video-ethnography is an extension upon traditional field notes as video is collected instead of, or alongside, field notes (Heath and Hindmarsh 2002). While traditional ethnography, with its observation, field notes and interviews, has much to offer in the exploration of medicine and its subcultures (Becker et al. 1961), it can fail to capture more nuanced details within talk and non-verbal interactions that are so key to feedback processes (Heath and Hindmarsh 2002). Video-ethnography can capture the broader aspects of the interaction such as the setting, participants and materials, as would be seen in traditional ethnography, but can also allow for more in-depth analysis of the finer details of talk and interaction such as body language and gesturing, language and para-language (Heath and Hindmarsh 2002).

Essentially, visual methods can help us to understand feedback-in-action, something that has been limited to date within the medical education literature with a few exceptions (Blatt et al. 2008; Molloy 2009; Rizan et al. 2014). Although these studies have explored feedback in some form utilising video they are limited in that they have each been conducted in one site only and have therefore not explored the influence of context on feedback. In addition, analysis has tended to focus on what is said by participants rather than on the non-verbal (i.e. visual) aspects of feedback or environmental factors. Therefore, our research aimed to explore gaps in the published literature about how context influences feedback processes (including non-verbal feedback) through video-ethnography methodology. In this research, we chose two different contexts that are common sites for teaching and learning in undergraduate medical education to explore context and feedback (Ajjawi et al. 2017). This paper will answer two key research questions: (1) What is the nature of feedback processes across both simulated and workplace learning contexts? (2) What are the differences in feedback processes between these two contexts?

Methods

Study design

This paper is part of a larger video-reflexive ethnography (VRE) (Iedema et al. 2006a; Iedema et al. 2006b; Iedema et al. 2013) study to explore medical student and teacher reflexivity on videoed examples of feedback in multiple learning contexts. In this paper, we focus solely on the video-observation (rather than the reflexivity) part of our VRE study because the VRE component answers a different research question (i.e. what are the differences in student and tutor perceptions of videoed feedback that might help to explain the feedback gap in medical education?) presented elsewhere (Urquhart 2015). Like with our VRE study, the video-observation part is underpinned by a social constructionist epistemology, which views knowledge as something that is created through social interaction and recognises the existence of multiple realities (Crotty 1998). We therefore take a qualitative interpretive approach in this study, despite exploring some numerical patterns between the two contexts with numbers (Maxwell 2010).

Context

Drawing on Bates and Ellaway's (2016) construction of context in medical education, we see some similarities and differences between the two contexts chosen for this study: the simulation centre of the medical school and an adult medicine ward in the teaching hospital of the medical school. Note that these sites were chosen based on our previous study exploring medical students' feedback narratives: students in this study frequently shared feedback narratives with us that were based within these two settings (Urquhart et al 2014). Similarities existed between the two contexts in terms of the physical and social contexts. For example, both were set within a teaching hospital within a small city (physical context), which exemplified values and beliefs consistent with western ideals and notions of the medical hierarchy (social context). However, the two contexts differed in terms of patient, practice, educational and institutional contexts. While the simulated context involved typically retired female simulated patients from higher socio-economic groups (see

participant characteristics later), the workplace involved real patients with more variable

demographic characteristics (patient context). While the simulated context focused on teaching, the

workplace context focused on patient care (practice context). While the tutors within the simulated

context had teaching roles focusing on the formal curriculum, tutors within the workplace had

predominantly clinical roles with their peripheral teaching roles focusing on formal and informal

curricula (educational context). Finally, although the simulated context was based in a UK University

medical school, the workplace context was a UK National Health Service ward in a teaching hospital

(institutional context).

Recruitment

After receiving ethics approvals from the University and NHS research ethics committees, we first

recruited the study sites by securing approval from organisational leaders within both contexts (i.e.

the director of clinical skills and the clinical teaching lead) that the study could take place within

their contexts. Once this had been agreed and a data collection period identified, we recruited

participants to the study starting with teaching and clinical staff (e.g. consultants, senior charge

nurse), then recruiting students to the study, and finally, recruiting patients (simulated and real)

where relevant. All participants were given an information sheet explaining the purpose of the

study and those agreeing to participate were required to give written consent.

Data collection

The first author conducted all filming in both contexts with a diverse range of teaching sessions

filmed. These were chosen during the familiarisation phase, which involved observation, review of

proposed timetables and discussion with students and tutors around appropriate sessions to film.

Across both sites, the aim was to film varied feedback processes with a diversity of feedback

interlocutors (both feedback providers and recipients). Participants were told that the researcher was keen to find out how students and tutors learned with and from one another but did not specifically mention (at the point of data collection) that the focus was on feedback. During the teaching and learning sessions in both contexts, the lead researcher positioned herself at the back of the room, taking a non-participatory role. While she was primarily static in the simulated context, she was largely mobile in the workplace context, moving around with the learning action of the ward with a small hand-held camcorder with a wide-angle lens to capture as much interaction including feedback activity as possible. At the end of filming, primary participants (i.e. those who were filmed and involved in feedback) were asked to complete a personal details questionnaire so that we might accurately describe our sample characteristics. Participants were asked about their age, gender, ethnicity, socioeconomic status and whether English was their first language. Students were also asked whether their medical degree was their first degree and to clarify their stage of training, and tutors were asked about their teaching experience.

Data analysis

The raw footage was uploaded to Atlas Ti (V7), which allowed for coding directly onto the video, which maintained the integrity of the action rather than reducing the action into words alone since a significant amount of feedback was non-verbal (Pink 2001). However, selected portions of the footage containing important feedback episodes were transcribed for inclusion in this paper.

We developed a coding framework that could be applied to the simulated and workplace data using Framework Analysis, which is a 5-step analytic process involving: (1) familiarisation, (2) identifying a thematic framework, (3) indexing, (4) charting and finally, (5) mapping and interpretation (Ritchie and Spencer 1994).

(1) **Familiarisation**: All three authors watched selected footage separately and identified themes in the data independently.

(2) **Identifying a thematic framework**: We met to discuss the themes and sub-themes we had identified independently, negotiating the coding framework containing agreed themes and sub-themes.

(3) **Indexing**: The first author coded the footage, in the first instance, for what we called 'feedback episodes', defined as an episode of feedback bounded by non-feedback talk, where the focus of talk or action changed. Note that our understanding of feedback was informed by a literature review (Urquhart 2015) and our previous feedback narrative study (Urquhart et al. 2014). So, feedback was understood as *any feedback given about knowledge, skills or behaviours by any possible provider* (e.g. teacher, self, peers, patients and so on). The first author coded these feedback episodes further using the key themes and sub-themes from our coding framework. See Table 1 for a summary of the higher-order themes from our coding framework (note that a copy of the full coding framework can be requested from the corresponding author).

(4) **Charting**: The lead author created primary document families relating to context (simulated or medical workplace) in order to explore the similarities and differences in feedback between the two sites. We explored patterns in our data using numbers such as frequency of sub-themes because of the large amount of qualitative data collected and our coding direct onto video. Despite this, we still maintained a qualitative, process-orientated approach to our analysis (Maxwell, 2010).

(5) **Mapping and interpretation**: Together we explored the similarities and differences between the simulated and workplace contexts and in comparison with the literature, including Bates and Ellaway's (2016) conceptualisations of context.

Throughout the lead author's coding, interrogation and interpretation of the data (stages 3-5 above), all three authors met regularly to discuss the developing findings and their interpretation, with any disagreements being fully discussed and negotiated.

[Insert Table 1 about here]

Results

Participant Demographics

A total of 142 individuals participated in the study across the two contexts: 104 students (81 simulated; 23 workplace), 19 clinical teachers (10 simulated; 9 workplace) and 19 patients (3 simulated; 16 workplace). The details of the participant characteristics can be seen in Table 2. In summary, students were typically female, white, English speakers who were undertaking medicine as their first degree and were from social classes 1 or 2. Tutors were typically male, white, English speakers from social classes 1 or 2 and patients were also typically male, white, English speakers but came from a more diverse social background with even spread across all social classes.

[Insert Table 2 about here]

Overview of teaching sessions and feedback episodes

A total of 28 different teaching and learning sessions were filmed across the two contexts: 10 sessions in the simulated context lasting 40-90 minutes (totalling 7 hours and 15 minutes) and 18 sessions in the workplace context lasting 5.5-74 minutes (totalling 7 hours and 37 minutes). The content and processes of teaching and learning across these two contexts were similar. For example, the teaching sessions in the simulated and workplace contexts both included students learning communication skills, procedural skills, knowledge, decision making, and examination skills. Furthermore, the processes of learning in both the simulated and workplace contexts included: tutors explaining information to students, tutors demonstrating to students how to conduct

something, tutors asking students questions, tutors facilitating small group discussions, tutors using paper or video-based scenarios or cases to facilitate student learning, and tutors encouraging students to practice their skills with patients (simulated or real). The key differences in the content and processes of learning between the two contexts was that students learned clinical reasoning, prioritisation and management in the workplace, plus workplace-based facilitators employed case presentations as a learning method (See Table 3 for an overview of the content and processes of learning for each of these 28 teaching sessions).

Across the 10 sessions within the simulated context, we identified 144 distinct feedback episodes (equating to one feedback episode every three minutes). Across the 18 sessions within the workplace context, we identified 95 distinct feedback episodes (equating to one feedback episode every four minutes and forty-eight seconds).

[Insert Table 3 about here]

Key themes

What follows is a presentation of the six higher-order themes identified through our team-based framework analysis (Ritchie & Spencer 1994). Within each theme, we answer both research questions posed at the start of this paper by explicating the nature of the feedback processes across both simulated and workplace learning contexts (RQ1) and the differences in feedback processes between these two contexts (RQ2). We provide numerous excerpts including video stills and transcripts throughout to illustrate both verbal and non-verbal features of feedback processes.

Theme 1: Feedback interlocutors and context

Senior tutors (meaning experienced teachers and/or clinicians) provided the majority of feedback in both contexts (86% simulated; 60% workplace). In the simulated context, these were the tutors leading the sessions and in the workplace context these were the consultants and registrars on the ward. Peers and patients also provided feedback although this represented a smaller amount of the

feedback provided in both contexts (19% simulated; 20% workplace). As well as the tutor providing the majority of the feedback, the tutors also instigated the vast majority of feedback in both contexts (84% simulated; 73% workplace). This was not only for feedback delivered by the tutors: senior tutors also typically instigated feedback from peers and patients too. However, students seemed more likely to instigate feedback in the workplace (21%) compared to the simulated context (15%), with students typically seeking feedback from sources other than senior tutors, for example, junior doctors and near-peers defined as learners one or more years senior to another learner at the same level of training (Bulte, Betts, Garner, Durning 2007: see Excerpt 1)

[Insert Excerpt 1 about here]

While the majority of feedback provided to students was directed at individual students in both contexts (60% simulated; 76% workplace), generalised feedback to the whole student group was more common in the simulated context (40%) compared with the workplace context (24%), possibly reflecting the formality of the teaching in the simulated context and bigger class sizes (n=5-16 students) compared with the workplace context (where group sizes were usually no more than 3 students). See Excerpt 2 for an example of generalised group feedback in the simulated environment.

[Insert Excerpt 2 about here]

Key Theme 2: Physical positioning of feedback interlocutors and context

The majority of feedback episodes in the simulated (79%) and workplace contexts (68%) involved feedback interlocutors (providers and recipients) being at the same eye level (see excerpt 2). However, when feedback interlocutors were at different levels, we see differences between the simulated and workplace contexts, with feedback providers being more likely to be lower than feedback recipients in the workplace context (14%) compared to the simulated context (1%). Feedback interlocutors in the workplace were more likely to provide feedback when within touching

distance of the student (73%). This is contrasted with the simulated environment, where only 40% of feedback was provided by interlocutors within touching distance of the student. See Excerpt 3 for an illustration of feedback providers being lower in the workplace context (but within close proximity), largely because the clinical teacher is sitting and the student standing.

[Insert Excerpt 3 about here]

Theme 3: Feedback types and context

The vast majority of feedback episodes in both contexts included verbal feedback (99% simulated; 94% workplace) and took the form of general comments or 'question-and-answer' type feedback, with feedback providers typically confirming whether the student was correct or not, rather than making suggestions for improvement. The feedback episodes in both contexts also contained similar percentages of non-verbal feedback (38% stimulated; 40% workplace), which either supplemented verbal feedback or was used instead of verbal feedback such as feedback providers shaking their heads or gesturing when a student's answer was incorrect. This can be seen in the following excerpt where the tutor uses gesturing with his hands and raising his eyebrows to indicate that the student's answer is incorrect (see Excerpt 4).

[Insert Excerpt 4 about here]

There were two key differences between the simulated and workplace context in terms of feedback types. Firstly, students received written feedback in the workplace (during formative and summative assessments: see excerpt 3) but did not in the simulated feedback episodes we witnessed. Secondly, feedback episodes in the simulated context contained more tactile feedback (defined as feedback provided through touch: 15%) compared with the workplace (6%) and this occurred during tactile skills learning such as procedural (e.g. cannulation) and examination skills (e.g. abdominal examination). See Excerpt 5 for an example of tactile feedback given in the simulated context.

[Insert Excerpt 5 about here]

Theme 4: Feedback foci and context

The feedback episodes across contexts included multiple foci, with similar amounts of feedback occurring in simulated and workplace contexts on students' examination skills (16% simulated; 16% workplace), procedural skills (28% simulated; 24% workplace), decision-making (10% simulated; 7% workplace), and clinical reasoning (10% simulated; 15% workplace). Interestingly, larger percentages of the feedback episodes in the workplace related to feedback on students' knowledge (58%) compared with the simulated context (31%), whereas feedback on students' communication skills was more common in the feedback episodes within the simulated context (31%) than in the workplace (7%). Finally, feedback on 'ward-craft' (i.e. the way the ward works) was only found in the workplace context (in 7% of the feedback episodes: see excerpt 6).

[Insert Excerpt 6 about here]

Theme 5: Feedback styles and context

Feedback was rarely signposted (e.g. "here's some feedback for you") in either the simulated or workplace contexts (3% and 7% of the feedback episodes respectively). Similar across contexts, feedback tended to be neutral in both the simulated (63%) and workplace contexts (68%), and it also tended to be specific (rather than vague) in both contexts (84% simulated; 81% workplace). Key differences between the simulated and workplace contexts were that feedback episodes in the simulated context were more likely to include feed-forward (i.e. suggestions to students on how they could improve: 53%) compared to the workplace (42%). Feedback in the simulated context however was more likely to be monologic (one-way: 31%) compared to the workplace (19%: see excerpt 2 above), whereas it was more likely to be dialogic (two-way) in the workplace (61%) compared with the simulated context (37%: see excerpt 7 below). This again perhaps reflects the higher student: tutor ratios in the simulated context (class sizes of 5-16) compared with the workplace (group sizes normally up to a maximum of 3 students).

[Insert Excerpt 7 about here]

Theme 6: Feedback milieu and context

While feedback in both the simulated and workplace contexts tended to be given without interruptions (94% and 92% respectively), there was typically a higher level of ambient noise in the workplace context (27%) compared to the simulated context (15%). Such high levels of ambient noise included machines beeping, pagers going off, telephones ringing, and people in the nearby vicinity talking, meaning that feedback often occurred in sub-optimal environments not conducive to talking and/or listening. Having said that, feedback in the workplace was more likely to be conducted privately with either nobody else present (31%) or just one or two other students present (47%), compared with the stimulated context where feedback commonly occurred with large numbers of other students present (66% cases with 3-10 other students present). While feedback in the workplace more commonly had another tutor present (20% of feedback episodes) compared with the simulated context (13%), patients were more likely to witness feedback to students in the simulated context (33%) compared with the workplace (11%). See Excerpt 8 for an example of feedback witnessed by a simulated patient in the simulated context and excerpt 1 for feedback witnessed by a patient in the workplace.

[Insert Excerpt 8 about here]

Discussion

Students in both contexts within our study were frequently offered feedback by tutors, as evidenced by the large number of feedback episodes identified in each context and their frequency. This was the case even within the workplace context where feedback was interspersed with the patient care tasks of the ward. We did not therefore find evidence of "vanishing feedback" that has been talked about in the literature (Ende 1983). What we did find, however, was six themes in our data, which we will summarise in relation to our two research questions and in comparison to existing literature

and Bates and Ellaway's (2016) construction of context in medical education. We then discuss the methodological strengths and challenges of our study before concluding with its implications for further research and educational practice.

Feedback interlocutors and context

We found that the majority of feedback across both contexts was directed at individual students and provided by and instigated by tutors, contrary to recommendations for sustainable feedback suggesting that learners need to be the driving force behind feedback (Boud and Molloy 2012; Hounsell 2007). Indeed, the research literature suggests that when feedback is tutor-driven, the tutor ultimately determines the content and timing of feedback rather than the learner (Askew and Lodge 2000; Carless et al. 2011). Consequently, learners may under-value feedback as the student might not want feedback regarding the tutor's content or at the time the feedback is delivered. Although tutors were the primary feedback provider across both contexts, we observed students receiving feedback from others such as peers (simulated context) and near-peers (workplace context). While previous research has shown both the benefits (e.g. peers are seen as more likely to understand the cognitive and social perspectives of learners and thus set the tone of feedback at a more appropriate level) and drawbacks of peer feedback (e.g. when pre-existing social relationships are a barrier to truthful feedback provision: Lockspeiser et al. 2008), our findings flag the potential importance of near-peers (as in excerpt 1). Drawing on Bates and Ellaway (2016), students were more likely to seek feedback from sources other than tutors in the workplace context, possibly reflecting the educational context of the workplace, with its greater diversity of feedback providers including near-peers such as senior students. Furthermore, students were more likely to receive generalised feedback from tutors to the whole student group in the simulated context, possibly reflecting the larger student group sizes in the simulated context (Bates and Ellaway 2016).

Physical positioning of feedback interlocutors and context

Feedback interlocutors appeared to be mostly at eye level across the two contexts, which was reassuring given that eye contact has been found to improve information (feedback) seeking behaviours (Argyle and Dean 1965). However, the proximity of the feedback provider to the student differed across the two contexts, with more opportunities for close proximity working in the workplace compared with the simulated context. Drawing on Bates and Ellaway (2016), such close proximity in the workplace perhaps reflects its educational context, where students and tutors worked in small teams. This contrasted with the educational context of the simulated setting, where large group teaching meant feedback was offered outside touching distance. Also, there were more examples of the feedback provider being lower than the student in the workplace. Reflecting on Bates and Ellaway's (2016) conceptualisations of context, this probably reflects the practice context of the workplace, where feedback was sometimes provided by clinicians whilst sitting at their desks or patients, while lying in their beds as students stood around them.

Feedback types and context

We observed a wide variety of types of feedback across the two contexts including verbal, written, non-verbal, and tactile feedback. Interestingly, the type of feedback often mirrored the focus of the learning task, such as verbal feedback for verbal tasks and tactile feedback for tactile tasks like procedural skills. While the majority of the feedback was verbal across both contexts, the video allowed us to capture numerous episodes of visual feedback that would not have been recorded through audio alone. Non-verbal feedback such as gesturing, for example, was frequently given in the context of incorrect answers or underperformed skills, possibly reflecting tutors' discomfort at correcting students (Cleland et al. 2008). In terms of tactile feedback, this only occurred during tactile procedural and examination skills. While there is a body of literature around "haptic feedback" in simulation, typically representing feedback through touch by machines such as simulated mannequins (Kapoor et al. 2014; Panait et al. 2009; Zhou et al. 2012), we think our study

is the first to report tactile feedback from tutors with real bodies. While students were more likely to receive tactile feedback in the simulated context, students in the workplace were more likely to receive written feedback. Drawing on Bates & Ellaway (2016), this probably reflects the patient and practice context of simulation with its focus on simulated rather than real patients and on teaching rather than patient care, and the educational context of the workplace, which mandates workplace-based assessments of students' clinical competence.

Feedback foci and context

We observed a wide variety of feedback on students' performance across the two contexts including their examination skills, procedural skills, decision-making, reasoning, knowledge, communication skills, and ward-craft (i.e. the way the ward works). Interestingly, by far the biggest proportion of feedback given to students in both contexts was on their knowledge, involving a question and answer style recalling of facts (i.e. the lowest point on Bloom's (1956) taxonomy for learning). This tendency to provide feedback on knowledge supports previous work, which found that 74% of feedback was knowledge-based (Blatt et al. 2008). However, this study was conducted in one context only, around the teaching of communication skills (Blatt et al. 2008). Therefore, our research extends this finding by showing that regardless of the purpose of teaching, tutors' default is typically to provide feedback on knowledge, possibly reflecting their comfort zones for feedback content. Interestingly, larger percentages of feedback in the workplace focused on student knowledge, while students were more likely to receive feedback on their communication skills in the simulated context. Drawing on Bates & Ellaway (2016), this possibly reflects the different educational contexts with workplace-based tutors having limited educational backgrounds (compared with tutors in simulated contexts) and the simulated context with its focus on teaching and tutors centring on formal communication skills curricula. Finally, students only received feedback on ward-craft in the workplace, reflecting the institutional context of the workplace as an

NHS medical ward in a UK teaching hospital (Bates & Ellaway 2016) and the informal curricula within this context.

Feedback styles and context

The majority of feedback across both sites was specific, thus conforming to current guidelines about successful feedback and pertaining to student preferences, as indicated in previous research (Urquhart et al 2014). However, worryingly, around half of the feedback episodes we witnessed across both sites did not contain any suggestions to students for further improvement, termed 'feedforward' in the feedback literature (Kluger and Van Dijk 2010). Having said that, students were more likely to receive feed-forward in the simulated context, probably reflecting the practice and educational context of the simulated environment, with its focus on teaching and having tutors with educational backgrounds (Bates & Ellaway 2016). Feedback in the simulated context was, however, more likely to be monologic than dialogic, probably reflecting the larger group sizes in this practice context focusing on teaching (Bates and Ellaway 2016).

Feedback milieu and context

Numerous environmental factors across both contexts such as ambient noise, people and interruptions could be seen to influence feedback. We know from the communication literature that the environment influences communication in terms of interlocutors' perceptions of the surroundings (warmth, privacy, familiarity, constraint, distance), time, people, moveable and immovable objects in that environment, sound and lighting and finally, the function of that environment (Knapp and Hall 2010). There was typically a higher level of ambient noise within the workplace context, reflecting the practice and institutional context with its patient care focus in an NHS ward in a UK teaching hospital (Bates & Ellaway 2016). Note that this contrasts with the student learning focus in the simulated environment, highlighted by the presence of disembodied

limbs and mannequins. However, feedback in the workplace was more likely to be conducted with fewer students but more tutors present, possibly reflecting the practice, educational and institutional context with its focus on patient care with diverse clinicians around the ward of the teaching hospital (Bates & Ellaway 2016). Students were more likely to receive feedback in the presence of patients within the simulated context, however, reflecting the patient context of simulation with its involvement of simulated rather than real patients (Bates & Ellaway 2016).

Methodological strengths and challenges

By conducting this research in situ we could explore feedback-in-action. By including two different, yet common, contexts for the delivery of medical education, we explored the influence of contexts (both within and between simulated and workplace learning environments) on feedback, something that has so far been under-researched in medical education (Ajjawi et al. 2017). That the lead researcher was an 'insider' researcher (i.e. both a teacher and clinician within both contexts) meant that she had relatively easy access to study sites and participants, plus established good rapport with students and tutors in both contexts, thereby facilitating the research processes including the ethics applications, site and participant recruitment and data collection (Burns et al 2012; Dwyer and Buckle 2009; Sherrif 2001). Furthermore, we have collected ample data and employed a rigorous process of team-based analysis from which we draw tentative conclusions about the influence of context on feedback.

Our study is not without its challenges however. Perhaps the most challenging part of the study for us was our making sense of (and operationalizing) the concept of context. Described by Bates and Ellaway (2016) as 'dark matter', we similarly found 'context' complex and manifold. For example, we were conscious that multiple contexts existed at different levels within both of our chosen 'contexts' (Ajjawi et al. 2017), making nice and neat comparisons between the simulated and workplace contexts difficult. However, we think that our qualitative interpretive approach, has allowed us to begin to tease out some of the complexities of context within and across the simulated and

workplace environments. While we conducted our study in two different higher-order contexts, both were situated within the same teaching hospital in a small UK city. Our findings therefore may not be transferable to other country-contexts. While some scholars situating themselves within a scientific approach would potentially question whether the presence of the lead author and video had altered the behaviours of those being observed (the so-called hawthorn effect), we remind the reader that our research was underpinned by interpretivism, which asserts multiple truths and interpretations of data. Within our interpretive approach, we considered reflexively our roles within the research process, particularly the role of the lead author who was, as mentioned above, an 'insider' researcher.. This provided both affordances (also described above) but also challenges including role confusion such as participants sometimes referring to her doctor role and therefore asking for her medical opinion, as has been described thoroughly by other authors (Burns et al 2012; Dwyer and Buckle 2009; Sherrif 2001). There were also practical challenges, for example, asking participants to complete consent forms and personal details questionnaires (PDQs) whilst trying not to "hold-up" the action of teaching or patient care meant that we have some missing demographic data for some participants. That we collected such a large volume of visual data in our study (i.e. 239 videoed feedback episodes) meant that we were only able to present a synthesis of patterns (i.e. similarities and differences) across this data with selected illustrative excerpts, meaning that an in-depth analysis of video episodes was outside the scope of this current paper. Finally, we are mindful that observational data does not provide us with a window into the thought processes of the participants we observed. Indeed, just because we identified lots of feedback episodes in our data, this does not mean to say that students or tutors recognised these episodes as feedback. This is where video-reflexivity is key within VRE, and we present the findings of our video-reflexive focus groups elsewhere (Urquhart 2015).

Implications

Our findings suggest that feedback processes are inextricably linked with context. Future feedback research must therefore pay more attention to the different layers of context within medical education (Ajjawi et al. 2017). We would encourage researchers to adopt visual methodologies such as video-ethnography in their feedback research as these methods are helpful in terms of exploring a broad range of feedback processes, as well as helping to visibilise the complexities of context including non-verbal feedback. Further research would benefit from presenting in-depth analysis of selected video episodes to explore the rich interplay between verbal, paralinguistic and non-verbal feedback. While our findings illustrate that our student participants received ample volumes of feedback, the quality of the feedback provided could be sub-optimal (e.g. monologic feedback without feed-forward). We suggest that in order to improve feedback in medical education for both tutors and students more consistently, we must first better understand the situational affordances and challenges offered by differing contexts (e.g. feedback interlocutors, physical positioning, feedback types, feedback foci, feedback styles, and feedback milieu). It is only by understanding these contextual nuances that we can better design learning opportunities for tutors and students around feedback, with the ultimate aim of improving student learning and patient care. We think this paper could act as a starting point in offering teachers and students a window onto feedback processes in the simulated and workplace environments in order to help both plan ways ahead in which each plays their part in future feedback episodes. We would encourage teachers to adopt video-reflexive methods in order to help visibilise their own feedback practices mindful of contextual considerations, again in order to inculcate positive changes in feedback practices. Finally, we hope that this study offers some renewed impetus on the journey towards better uncovering the relationships between context and feedback.

Table 1. Higher-order themes for our preliminary coding framework*

Code #	Code name	Code definition including sub-themes
1	**Feedback episode**	Section of video and/or transcript containing a whole feedback episode
2	**Feedback provider**	This is the person who delivers the feedback (e.g. senior or junior medical or nursing tutors, peers or near-peers, simulated or real patients, or self)
3	**Feedback recipient**	This is the person/persons receiving the feedback (e.g. individual student or group of students)
4	**Nature of feedback**	This includes the nature of the feedback such as it being complimentary, non-complimentary, specific, vague, and including or excluding feed-forward (i.e. feedback making suggestions for improvement)
5	**Mode of feedback**	This includes the mode of feedback such as whether feedback is verbal, written, non-verbal including tactile and non-tactile feedback and paralinguistic such as the feedback provider expressing utterances like 'mmmhhmm'
6	**Learning activity type related to feedback**	This includes the type of learning activity the feedback relates to such as feedback on communication skills, examination skills, procedural skills, knowledge, decision making, professionalism, reasoning and/or ward-craft
7	**Other persons present during feedback**	This includes detail about the other persons present in the feedback episode including the number of others present and who they are such as tutors, simulated or real patients, nurses, etc.
8	**Timing of feedback**	This includes the timing of the feedback in relation to the task conducted within the feedback episode such as during or immediately after the task and/or feedback being interrupted
9	**Feedback instigator**	This is the person who instigates the feedback such as tutors, self, peers or near-peers, and real and simulated patients. Note that the feedback instigator may or may not be the same person as the feedback provider (see code 2 above).
10	**Feedback signposting**	This is whether or not the person giving feedback specifically says "this is feedback" or words to that effect before or after giving the feedback
11	**Feedback style**	This includes the feedback style employed within the feedback episode such as whether the feedback is uni-directional (so monologic), or bi-directional (such as dialogic) or involves multi-way discussion involving three or more people (trialogic)
12	**Physical positioning of feedback interlocutors**	This includes the physical positioning of the feedback interlocutors including whether they are within touching distance or not and whether they are at eye level with each other or not
13	**Environment for feedback**	This includes features of the environment in which the feedback episode takes place including low and high levels of ambient noise and whether feedback is interrupted or not by other things within the environment such as phone calls

*The full coding framework is available on request from the corresponding author

Table 2: Participant Demographics

		Students (Workplace) Year of Study*				Students (Simulated) Year of Study**			Tutors (Workplace)	Tutors (Simulated)	Patients (Workplace)	Patients (Simulated)
		1	2	4	5	1^	2	3				
Gender	M	4	0	2	2	12	8	12	7	5	10	1
	F	7	2	2	4	21	8	20	2	5	6	2
Age	17-21	10	2	1	0	23	12	21	0	0	1	0
	22-30	1	0	3	6	7	3	4	3	1	0	0
	31-40	0	0	0	0	1	1	2	4	4	3	0
	41-50	0	0	0	0	0	0	0	0	3	1	0
	51-60	0	0	0	0	0	0	0	1	1	2	0
	>60	0	0	0	0	0	0	0	0	0	8	3
Ethnicity	White	11	2	4	6	29	14	26	8	9	16	3
	Non-white	0	0	0	0	2	2	1	1	1	0	0
English as 1st Language	Yes	11	2	4	5	31	12	23^	9	10	16	3
	No	0	0	0	1	0	4	2	0	0	0	0
Medicine as 1st degree?	Yes	11	2	4	6	22	13	17	N/A	N/A	N/A	N/A
	No	0	0	0	0	9	3	5	N/A	N/A	N/A	N/A
Social Class	1/2	11	0	3	30	15	10	19	9	10	4	3
	3/4	0	2	1	1	0	5	2	0	0	4	0
	5/6	0	0	0	0	0	0	0	0	0	1	0
	7/8	0	0	0	0	0	0	0	0	0	7	0

Notes: *There were no 3rd year students on placement during the time of the study; **Only students from 1st-3rd year attend teaching here regularly; ^There is some missing demographic data for participants. Either, participants did not answer all questions on the personal details questionnaire (PDQ) or did not complete the PDQ at all.

Table 3. Content and process features of the 28 teaching sessions in simulated and workplace contexts

#	Length (mins)	Student Year	Teaching content	Teaching processes
			Simulated context	
1	40	First	Students taught to conduct a patient handover (*communication skills*)	Senior tutor explains the SBAR (situation, background, assessment and recommendation) method of communicating information amongst colleagues. Students engage in small group discussion around poor communication in the hospital. Students receive feedback from senior tutor around their use of SBAR method
2	40	First	Students taught to take blood pressure and check urinalysis (*procedural skills*)	Students are shown a DVD of a simulated patient (SP) who is deteriorating to stimulate discussion. Students are then split into pairs to practice procedural skills with feedback from peers and the senior tutor
3	45	First	Students reflect on their communication & examination skills learning to date (*reflective practice*)	Each small group is asked to discuss what they have learned over the term providing a stimulus for self and peer feedback. The senior tutor provides feedback to the entire group about their progress
4	38	First	Students manage an acutely unwell SP (*knowledge, skills and decision making*)	Senior tutor presents a scenario and asks students to assess/manage a breathless patient. Tutor asks questions and provides feedback on their practical skills and decision making. A final debrief provides students with senior tutor, peer and SP feedback around their knowledge and decision making
5	41	Second	Students taught to examine an abdomen (*examination skills*)	Senior tutor demonstrates the technique on a SP followed by students practicing this technique whilst peers watch. Feedback is provided by senior tutor, peers and SP on examination technique and communication skills
6	46	Second	Student takes a history (*communication skills*)	One student undertakes a consultation with a SP whilst peers watch. A debrief at the end provides feedback from the senior tutor, peers and the SP around the content and process of the consultation
7	43	Second	Students taught to insert a venous cannula into a simulated arm (*procedural skills*)	Senior tutor demonstrates the technique and then students are given time to practice. Students receive feedback from peers and from the senior tutor around their technique
8	50	Second	Students taught to take a history from a patient with psychiatric illness and	Senior tutor plays a DVD of a psychiatrist consulting with some patients. Students are asked to describe aspects of the consultation and are asked questions by the tutor who

			conduct a mental state examination *(communication skills)*	provides knowledge-based feedback on their answers
9	41	Third	Students revise anatomy of ear & larynx and learn to use an otoscope *(anatomy knowledge and procedural skills)*	Senior tutor examines a student's larynx with a laryngoscope as students revise the anatomy of the larynx and discuss clinical problems. A second tutor revises the anatomy of the ear and then students examine each other's ears with otoscopes. Senior tutor provides feedback on their technique and anatomy knowledge. Peers also provide feedback on technique
10	53	Third	Students taught to take a collateral history from patient's relative *(communication skills)*	Senior tutor directs the students to take turns to take a collateral history from a simulated wife and husband pair whilst other students watch. The senior tutor provides feedback during the session and leads a debrief at the end where the tutor, SPs and peers provide feedback on the content and processes of the collateral history taking
Workplace context				
11	80	First	Students take histories and examine real patients focused around the respiratory system *(communication skills, examination skills, knowledge and decision making)*	Senior tutor conducts bedside teaching with students involving them in taking histories and examining patients in pairs. The group meets again in a teaching room away from the patients to receive feedback from the senior tutor around their knowledge and clinical decision making
12	72	Second and Fifth Year	Students have their clinical knowledge tested by senior tutor *(knowledge)*	Students attend a ward round conducted by a senior tutor. In between patients the tutor asks the students questions and they receive feedback on their knowledge
13	12	Second and Fifth Year	Students learn to take and interpret an arterial blood gas sample *(procedural skills and knowledge)*	Senior student takes an arterial blood gas test from a patient whilst two junior students watch. The patient provides feedback on their technique at the bedside. Then, away from the patient, a junior tutor shows the students how to use the machine for analysis and the senior student teaches the junior students how to interpret the result, providing feedback on their knowledge
14	24	Fifth Year	Student is supervised inserting a peripheral cannula *(procedural skills)*	Fifth year student attempts to insert a cannula into a patient's arm but is unsuccessful. They receive feedback on their technique from a junior doctor at the bedside
15	8	Second and Fifth	Junior student takes blood from a real	Junior student takes blood for the first time whilst supervised by a senior student. They

		Year	patient *(procedural skills)*	receive feedback on their technique from the patient and the senior student at the bedside
16	9	Fourth Year	Unclear learning content	Senior student attends a consultant-led ward round but receives minimal feedback as all of the interaction is with patients. Students are mainly observers.
17	16	Fourth Year	Student has some teaching on taking and interpreting an arterial blood gas *(knowledge and procedural skills)*	Junior tutor gives an impromptu tutorial around taking and interpreting arterial blood gas tests and provides feedback on the student's knowledge
18	75	Fourth Year	Students are taught about anaemia *(knowledge and clinical reasoning)*	Students attend a formal tutorial around theoretical cases of anaemia. The senior tutor provides feedback on their knowledge and clinical reasoning
19	6	Second and Fourth Year	Students review radiology *(anatomy knowledge)*	A senior tutor reviews an x-ray of a patient on the ward round and asks students questions about this away from the patient, providing feedback on their knowledge
20	7	Fourth and Fifth year	Students learn how to administer drugs via a nebulizer *(procedural skills)*	Senior nurse provides an impromptu tutorial on how to administer drugs via a nebulizer at the bedside of a patient. There is limited student feedback
21	15	Fourth and Fifth Year	Unclear learning content	Students observe a ward round led by a senior tutor but there is minimal feedback as all of the interaction is with patients. Students are mainly observers.
22	13	Fifth Year	Students are allocated tasks to complete by junior doctors *(prioritisation skills)*	After a ward round the tasks for the day are allocated to students by junior doctors in the doctors' room. Students are given feedback on their prioritisation skills
23	8	Fifth Year	Student completes an electronic discharge prescription *(procedural skills)*	Two senior students complete a discharge document together in the doctors' office. One has never done this before and is mentored by their peer who provides feedback on what they should write
24	36	Fifth Year	Student undertakes a formative workplace-based assessment with senior tutor *(knowledge, clinical reasoning, communication skills, examination skills)*	The student is asked to speak with and examine a patient and then present their findings to a senior tutor who then asks questions on their management of the patient. The tutor completes the assessment tool with the student in his office, providing written feedback on knowledge and clinical reasoning
25	8	Fifth Year	Student clerks a new patient	A senior student completes an admission clerking including history and examination for a new patient and presents the patient to a

			(communication skills, examination skills, management)	junior doctor. The junior doctor then provides feedback on aspects of the history and management plan in their office
26	37	Fifth Year	Students conduct end of block assessments involving case presentation *(communication skills)*	Students present and discuss a case they had seen during their attachment to a group of doctors and other students and are provided with verbal feedback from the group. Later they receive written feedback about their performance during the attachment from a senior tutor
27	40	Fifth Year	Students conduct end of block assessments involving case presentation *(communication skills)*	As above. One student with elements of underperformance is given their feedback in private in the senior tutor's office
28	11	Fifth Year	Student learns how to complete a referral to a multi-disciplinary team meeting *(IT skills)*	Junior tutor teaches the student how to complete an IT based procedure in the doctors' office in the ward area but there is limited feedback

Excerpt 1: Student seeking feedback from near-peer

Workplace context: Senior student supervises junior student taking blood

3rd Year Student: I'll just have an inspect first (looks to 5th year student for reassurance)

5th Year Student: Yep

3rd Year Student: (to patient) Could you just clench your fist? (3rd year palpates around patient's arm) (To 5th year) I think there? (Said hesitantly)

5th Year: So you know that sometimes if you see one (a vein) that's not always the best. Try to use two fingers and see if it bounces back (Gesticulates by demonstrating the intended technique) Just do that

3rd Year: Oh okay (continues to palpate the arm for some time) I think there? (Said hesitantly)

**5th year**: Do you want me to check? (Feels the vein that the 3rd year has identified)

(To 3rd year) That's absolutely perfect

3rd year: (Exhales and looks relieved) Okay

{Transcription notes: Text not in brackets is a direct quote from a participant. Text in brackets is added detail by the research team to provide description and context to the dialogue.}

Excerpt 2: Generalised group feedback

Simulated context: First year students learn to conduct a patient handover and discuss poor communication in the hospital
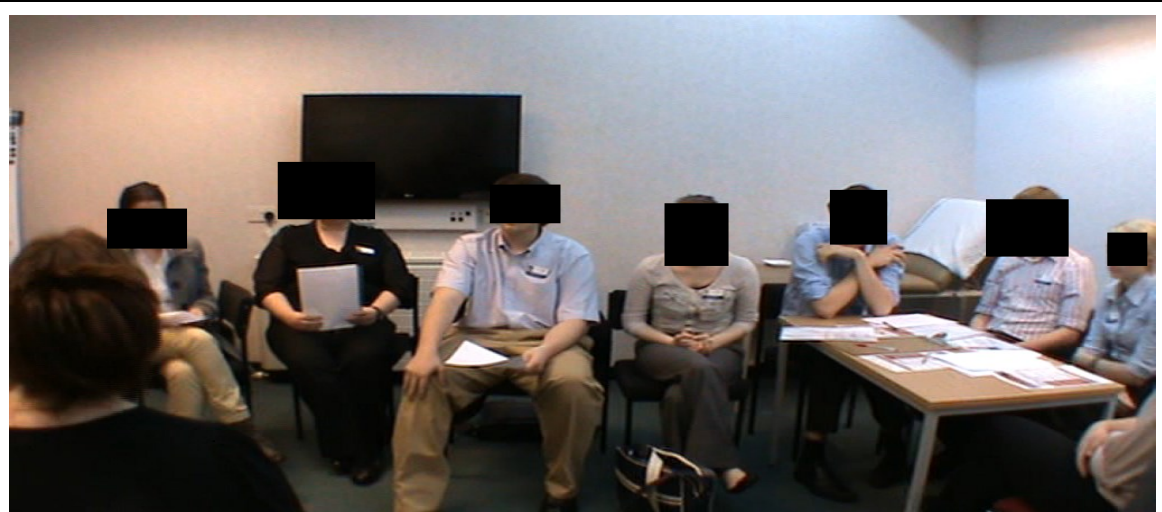

Tutor: (To 8 students sitting opposite her in a row) Well done that was a really, really good structured handover from every one of you. Everybody put in a date of birth, which I'm delighted about (Long comment about ensuring the importance of checking patients' dates of birth when in the workplace)... I think you used the structure (SBAR: Situation, Background, Assessment, Recommendation) really, really well

Students: (No verbal response from the students)

Excerpt 3: Physical positioning of feedback interlocutors

Workplace context: formative assessment of a final year student's history taking from a patient using

the mini-CEX
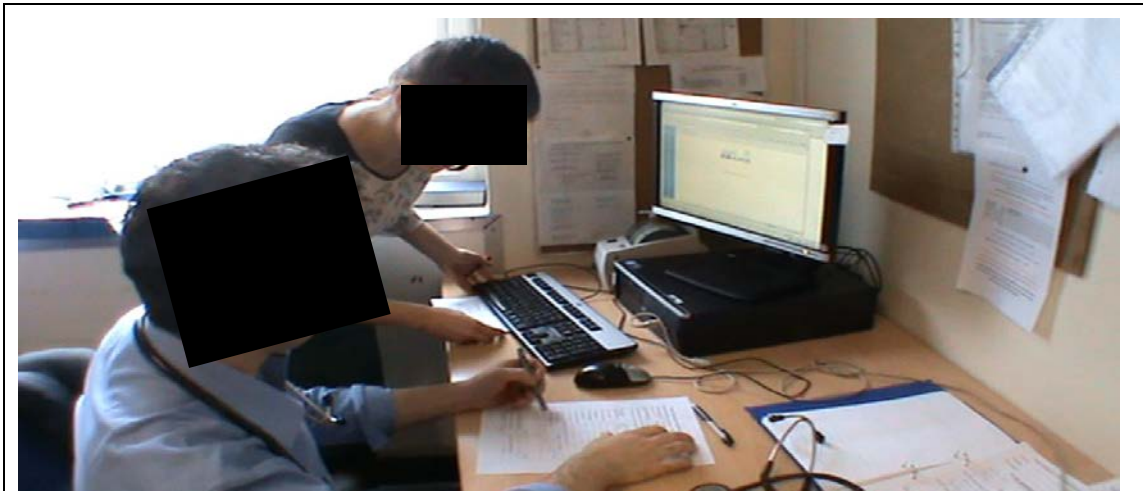
Tutor: (Gesturing towards various parts of the form) okay so the history taking we mainly

focused on the history of presenting complaint… The examination I think ideally I'd like to see

you examine the patient and just go over what your findings were but everything else was

okay so just carry on doing what you're doing and get more experience. I'll just put (into free

text form) 'more experience on the ward'

Student: Thank you

Excerpt 4: Non-verbal feedback

Workplace context: Senior tutor has a discussion with 5th year student during her end of block appraisal

Tutor: Do you think he (the patient) should have had a CTPA (scan which looks for blood clot in the lungs)? Do you think it was at all likely he had a PE (pulmonary embolism)? (Looks at his pager which has just gone off)

Student: Well it could be that the reason he was admitted up was over the last two days his symptoms got suddenly worse… a sudden change could be suggestive that he may have (pauses)… well no I'd say I think it is possible

Tutor: But em should he have had the CTPA, was that the right test?

Student: (Seems unsure) Should they have done the d-dimers (a blood test to predict if someone has a clot) first?

Tutor: (Gestures with hands as though he is weighing something up and raises his eyebrows)

Student: (Still unsure) maybe yes?

Tutor: (Gives same gesture and still does not give verbal confirmation as to whether this is the

right or wrong answer)

Excerpt 5: Tactile feedback

Simulated context: Tutor provides feedback to student learning to cannulate a prosthetic arm while another student observes


Tutor: Now what you are doing there, the way you've got your hands you're not going to see the flashback (as he says this he takes hold of the equipment and directs it in the hands of the student, repositioning it appropriately) so if you practice holding it the way I was holding it and then you can see the flashback because where you've got your hand you're not going to see it

Student: Oh, okay

Excerpt 6: Feedback on ward-craft

Workplace context: Senior student receives feedback from junior doctor on when to start the discharge prescription for a patient
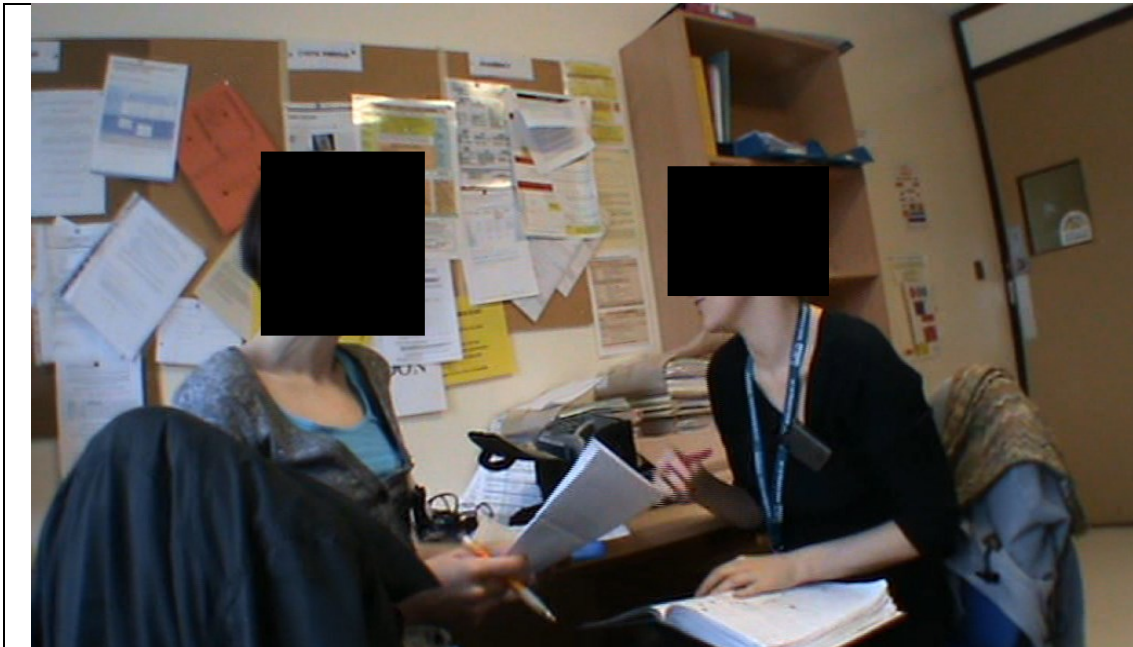
Student: It's all social stuff that's keeping him (the patient) in isn't it?

**Tutor**: Yeah, but we can do it (complete the discharge form) and then it's ready

Student: We could probably do (names patient) because I think she is almost fine, they are just waiting for her to (unclear) (said hesitantly and makes a facial expression that suggests she is not sure whether this needs doing)

Tutor: Yeah but wherever you go to work though just remember that you, start discharge, start the discharges as soon as there's a wind (of the patient going home). Like in surgery you do them as soon as you do the clerk-in (both laugh)

Student: Right, okay (laughing)

Excerpt 7: Dialogic feedback

Workplace context: Senior student seeks and receives feedback on how to write in notes during the
ward-round
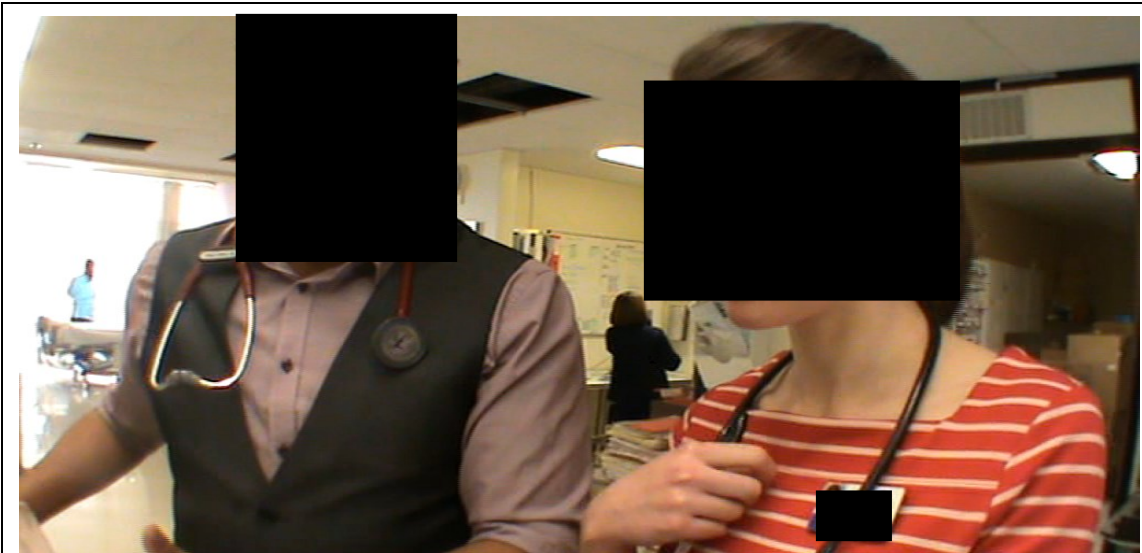
Student: I'm still not getting it (the correct information from the ward-round) in the right

order (in the notes)

Tutor: (Laughs good naturedly) Well what I tend to do when I'm writing in the notes,

especially when someone else is leading the round it's not always going to (Laughs good

naturedly) go in the same order so if you just leave big spaces (Gesturing towards the notes),

so have a zone for subjective…

Student: Yep, ok

Tutor: and you can always come back and fill them in as you go

Excerpt 8: Patient witnessing student feedback

Simulated context: Tutor gives student feedback on his communication skills during an abdominal examination

Student: Pulmonary oedema?

Tutor: Okay, yeah, check for oedema

Student: (To simulated patient) Can I just get you to sit up for me? (Helps patient to sit up)

Patient: Sure, yeah

Student: Thank you

Tutor: (Addressing the rest of the group whilst the examining student looks for oedema) Good instructions, good clear voice

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