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# Participant evaluations of group reflection: video-stimulated interviews show what residents value and why

Running head: Participant evaluations of group reflection

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**Abstract**

The potential of reflection for learning and development is broadly accepted across the medical curriculum. Our understanding of what exactly lends reflection its educational promise, however, is limited to broad hints at the relation between reflection and learning. Yet, such understanding is essential to the (re)design of reflection education for learning and development. In this qualitative study, we used participant perceptions as a window into features that make reflection educationally valuable. We recorded group reflection sessions and conducted one-on-one video-stimulated interviews with Dutch residents attending these sessions while training to become general practitioners. During the interviews, the residents were invited to comment on aspects of the sessions that they did or did not value. We identified all evaluations and associated mechanisms suggesting why a practice did (not) contribute to learning and synthesized them in a coherent normative narrative on valuable group reflection. The narrative displays residents' views on the aim of collaborative reflection (educational value for all), norms that allegedly contribute to realizing this aim (inclusivity, diversity, safety, and efficiency), and specific educational activities that reflect these norms. These findings deepen theoretical understanding of reflection and can be used to foster professional teacher development and curriculum design.

## Introduction

Reflection education plays a key part in medical curricula of all sorts: from basic medical training to medical specialist training to continuous medical education for accomplished professionals (Hellermann 2009; Sandars 2009). Reflective activities in medical education take their importance from the assumption that reflection fosters learning, which renders competent professional behavior (Sandars 2009; Aronson 2011; Schei et al. 2019; Wilson 2020). Yet, this assumption is not consistently buttressed with empirical evidence: the efficacy of reflection for learning and professional development varies between studies and contexts (Sandars 2009; Uygur et al. 2019). Evidence for long-term positive effects on professional development is limited (Mann et al. 2009; Sandars 2009), but reflection has been shown to increase learning and professional development in the shorter term (Sandars 2009) and in specific contexts, such as complex patient cases (Mann et al. 2009; Sandars 2009).

The lack of consistent evidence for reflection may in part be due to the ways in which the effect of reflection is measured. The majority of studies evaluate the effect of reflection on *learning outcomes* (Uygur et al. 2019). These studies focus on the extent to which reflection contributes to the modification of attitudes and skills and acquisition of knowledge and skills – the second level of evaluation in the widely established Kirkpatrick Model of training evaluation (Kirkpatrick and Kirkpatrick 2016). Though insightful, their findings do not provide teachers with practical information on how to design good reflective activities. As first level evaluations (Kirkpatrick and Kirkpatrick 2016), *participant evaluation* of reflective activities does provide useful information as it is a valuable resource for understanding "how reflective learning within the curriculum can be better developed to increase engagement from learners" (Vivekananda-Schmidt et al. 2011, p. 1).

Despite their value, reports of participant evaluation of reflection are still uncommon. Studies describing participant perspectives mainly focus on students' perceptions of the *effect* of reflection on learning and development, not the *mechanism* that explains the relation. In research across the medical curriculum, students report that written reflection exercises improve their skills to formulate learning needs, integrate knowledge from different sources (Grant et al. 2006), and learn from experience (Larsen et al. 2016). Also, these exercises allegedly raise awareness of the students' learning (Larsen

et al. 2016), boosted their confidence about already present knowledge and skills (Grant et al. 2006), and provided support and encouragement (Özçakar et al. 2009). As for peer reflection sessions, these have been reported to train students' skills in challenging and supporting others' views (Green 2002), improve their readiness for practice (Green 2002), reduce stress, improve patient care, and stimulate professional development (Lutz et al. 2013). Reflective activities are generally rated positively, but some researchers have reported students' evaluation of reflection as an unnecessary burden (cf. Vivekananda-Schmidt et al. 2011; Murdoch-Eaton and Sandars 2014; Veen et al. 2020). In summary, participants appear to value reflection for its various effects on learning outcomes, but are also critical of the investment required to reach that effect.

Findings on the perceived effects of reflection illuminate its potential benefits and pitfalls for learning and development. Yet, they shed no light on the mechanisms that explain *why* reflection contributes to learning. Other than data on general characteristics of reflective activities that appear to be valued (e.g., peer support in group reflection sessions (Chou et al. 2011) and facilitation of reflective processes (McEvoy et al. 2016)), we lack empirical data on the actual mechanisms that lend reflection its educational promise. Yet, those mechanisms are crucial in determining what works for whom and in which circumstances (Wong et al. 2012; Giroldi et al. 2014). This knowledge is the cornerstone of medical curricula to promote reflection and of teacher training to facilitate reflection. Therefore, our study builds on the value of participant perspectives for understanding how reflection contributes to learning (Vivekananda-Schmidt et al. 2011) by exploring *participants' evaluations* of reflection activities and their views on the *mechanisms* that link reflection to learning and development. We conducted video-stimulated interviews with Dutch residents in vocational training for general practitioners (GP) who participated in reflection sessions to identify what they experienced as negative or positive about the sessions – and why.

## Methods

### Study design

Our choice of a qualitative study on video-stimulated interviews to describe participant perspectives on reflection education served as a proxy to Kirkpatrick and Kirkpatrick's suggested

evaluation ideal: “If there were unlimited time and resources, each student in the class could be interviewed and asked specific questions to dig deep and learn all that we wished to know.” (Kirkpatrick and Kirkpatrick 2016). Video-stimulated interviews are acknowledged for their close relation to authentic practice (Barton 2015), which answers our aim of discovering the workings of reflection as it happens in actual medical education.

**Data collection**

In this study, we evaluated a key educational form of the Dutch GP vocational training on a national level: Learning from Experiences sessions (LfE). We conducted video-stimulated interviews with GP residents participating in 24 recorded LfE sessions from all eight training institutions in The Netherlands. During weekly LfE sessions scheduled throughout their three-year GP training program, small groups of 5–15 GP residents collaboratively discuss experiences from practice (Veen and de la Croix 2017). The sessions typically last 1-1,5 hours and are facilitated by one or two teachers (an experienced GP and/or a behavioral scientist or psychologist), whose task is to facilitate reflection for professional learning and development.

We selected sessions for recording using maximum variation sampling over the eight Dutch GP vocational training institutes and year of the GP training program (see Table 1). All residents and teachers of the recorded groups gave written informed consent. On the informed consent form, residents could agree to do a video-stimulated interview and, eventually, 31 residents were interviewed within two weeks of the recording (see Table 1).

--- Table 1 ---

Interviews were conducted between May 2017 and January 2019 by two authors (EG and MB) who were not involved in the design or teaching of LfE sessions, giving them a relatively neutral stance to LfE. As anticipated, their ‘outsider’ role created a safe environment for residents to express their potentially critical opinions of the recorded sessions. Interviews followed a pilot-tested interview protocol (cf. van Braak et al. 2018). Participants gave written informed consent prior to the interview. During the 45–60 min. interview, residents were asked to select for reflection a part of the recorded

session that was in any respect noteworthy for them. The interviewer instructed the resident to comment on any aspect of the viewed recording that they had experienced as positive or negative. Residents were encouraged to stop the recording and start talking whenever they wished; they were prompted only minimally (van Braak et al. 2018) to minimize researcher influence on what was evaluated. Interviews were audio-recorded for transcription, during which recognizable personal and institutional information was anonymized. Ethical approval for this study was obtained from the Ethical Review Board of the Dutch Association of Medical Education (NVMO), dossier 829.

**Analysis**

Interviews were analyzed by MB, MV, and EG using Template Analysis (King 2012) in Atlas.ti. After analyzing one interview to establish the unit of analysis and coding approach, EG and MB decided to code any evaluation of any aspect of the recorded session for its evaluated *object* (what is evaluated), *valence* (positive, negative, neutral/nuanced), *content* (summary of the evaluation), and – if present – *mechanism* (why/how is this evaluated aspect negative/positive). MB then coded all the interviews. MV double coded every fifth interview, after which MB and MV conferred for consensus; codes in already coded interviews were adapted accordingly.

Having coded the evaluations and mechanisms in all interviews, MB merged the overlapping codes and organized the resulting 450 evaluation codes and 251 mechanism codes into central themes (e.g. structure, safety) while preserving the connections interviewees had made between evaluations and mechanisms. Building on the central themes, MB and MH then identified the normative orientations underlying the evaluations: what kind of norms do these evaluations reflect? The findings present the integration of individual evaluation as a normative narrative, the discourses enacted by GP residents in evaluating group reflection sessions (Gee 2014).

## Results

In the interviews, residents discuss valuable LfE sessions in terms of providing *educational value for all*. In the residents' discourse, *inclusivity* and *diversity*, *safety*, and *efficiency* are key norms that are perceived to contribute to the sessions' main goal of educational value for all. In the following, we first elaborate on that goal, then discuss the normative orientations that supposedly contribute to it.

Finally, we present the residents' views on the value of activities and contributions to ongoing reflective interaction in light of the normative orientations.

**Collaborative reflection: aim**

Residents consistently addressed a common benchmark for good collaborative reflection: "educational value for everyone" (interview F803). This is represented as a 'layered' value, constructed throughout the reflective discussion in three layers (Figure 1).

--- Figure 1 ---

Building on a *specific experience* shared by one individual (1), the group should treat the experience as a token of a *type of experience* (2) that is recognizable as a relevant and *meaningful* issue that carries a sense of urgency *in the process of becoming a GP* (3). For example, a resident may share an experience of a difficult patient contact (1), which is treated as a token of a broader interactional dilemma such as discussing a difficult matter with a patient while not damaging the relation of trust with the patient (2). This is ultimately discussed in the context of being a GP, who has to be able to say things that either would not be said or would be very delicate to express in daily life (3). This token-type relation allows for educational interaction that serves both the individual who experienced the situation as well as others who might have had or will experience similar situations. Talking about what happened may seem a tedious practice at first and a long shot toward professional development, but it is perceived as carrying a significance that highlights the unique quality of the participants' current situation in training: "a luxury position that you won't have once you've graduated, and […] this is the time to use it" (D700). Ideal LfE discussion, thus, is relevant for the practice of multiple participants beyond the here and now.

Though the importance of achieving educational value is widely shared, the interviews display residents' disagreement about the nature of this value. Some appreciate the value of obtaining new knowledge, a solution to a problem or advice about an issue. Given their comparable situations, residents can relate to each other's issues, which increases the perceived value of their advice. Others, though, regard many discussions as "too solution-oriented" (C811). They acknowledge the

significance of recognition by "peers who are in the same boat" (D753). Its relativizing and reassuring potential, in their view, might benefit long-term practice more than solutions or advice do. For some, sharing is already valuable enough as an activity in itself. It helps to organize one's thoughts or just "get things off your mind" (D753) with the group merely functioning as a sounding board. This is one of the main points in which residents' views diverge: should LfE discussion carry value beyond the sharing? Mostly, yes. As one resident put it: "I don't really like it when it's just venting for the sake of venting. […] I really think it should produce, you know, a return on learning, that you get something out of it" (D753).

Another view that residents consistently express is that it is not enough for the reflective discussion to *have educational value,* but that value should also apply to *everyone* present. Summarizing an evaluation of a session they attended, one resident commented on its value for the group members:

> "Yes, for [name of one resident] personally, I think it had [value], but for the group, I thought, it wasn't the most clarifying of sessions. Last week's session was, I thought, far better because [then] many more people brought up their personal issues" (E821).

The resident quoted here distinguishes personal benefit from group benefit, characterizing the limited value as a lack of clarification. In contrast to the session currently discussed, last week's session featured many more people's personal input – which supposedly contributed to its educational value.

**Collaborative reflection: conditions**

To realize *educational value for all*, group reflection interaction should, according to the residents, be *inclusive and diverse*, *safe*, and *efficient.*

**Inclusivity and diversity.** In residents' talk about the group reflection sessions, the bottom line for creating educational value is for something *to be brought up* for discussion. If issues go unshared, stories remain untold, responses are withheld, turns are passed, what can be learned? Residents oriented to a norm of inclusive participation: everyone should get the chance to bring

something up for discussion and contribute to the discussion of what is brought up. Only in that way is value created for all, as one resident explained:

> "Sometimes I'm rather passive, because then I think, well, I just can't do it. I won't yell over other people's voices. Um, yeah, it differs quite a lot, actually. Some days I'll do my [best]. Some days I'll find my story really important and then I'll stand up for [myself]. Then I'll always try to speak up. But, um, yeah, I think that […] sometimes I find it hard to find the space for that. Mostly it's the same people […] who probably benefit more from the exchange [of experiences] because they have more turns" (C808).

Standing up for one's right to have a turn, as this resident puts it, may be one way of obtaining a turn, but residents also value the shared responsibility of all participants (including teachers) to distribute turns fairly. Both overtly active and apparently passive participants should learn to dose their participation in the group discussion. A variety of participants creates a diversity of perspectives, which the interviewees evaluated as beneficial to the learning process. Importantly, though, residents do not like being forced to participate, as compulsory contribution may reduce authenticity and compromise a safe learning environment, which in turn depreciates the educational value.

**Safety.** Related to the condition of inclusivity and diversity is residents' orientation to 'safety', that is "feeling safe [enough] to bring up something for discussion", "to not turn on each other", "to be able to say things to each other respectfully, even the less pleasant things" (B870). Participants regard a safe learning environment as one that allows non-judgmental interaction that encourages vulnerability and openness. In such an environment, everyone respects each other, including possibly opposing, idealized, unorthodox views and whatever situation they are in. Creating a safe learning environment, many residents commented, is a co-construction of teachers and residents. Residents see it as the task of the *teacher* to treat mistakes as learning opportunities, not as evidence for low assessment. *Residents* can contribute to a safe climate by welcoming others' viewpoints and opening up about personal issues relevant to becoming a GP. Teachers can validate such displays of vulnerability by complimenting residents who do so for the example they set for others in the group.

**Efficiency.** Inclusivity, diversity, and safety could be interpreted as a wildcard for long and deep reflection sessions. Residents, however, stress the importance of efficient discussion. Probably in parallel with their professional practice, they appreciate interactional behavior that promotes progression toward the educational end in terms of pace and 'depth' of discussion. Such progression requires structured yet dynamic interaction, which is mostly perceived as the teachers' responsibility. Teachers' contributions are weighed for their potential to spur discussion to higher levels and time-efficient processes. One resident, for example, rated a certain teacher's "intervention" (raising a new subtopic) as "a very good contribution" (A823) because it smoothed the interactional process and reopened the discussion about an issue that was relevant both to the case in question and everyone else's practice too. Doing this, the teacher created educational value for everyone.

Residents value various other ways to create efficient discussion. In their view, residents themselves can contribute to efficiency by posing leading questions or raising an issue for discussion. The group should help define the issue if it is still unclear for the resident speaking. These actions focus the discussion onto the main point of value for residents and allows an issue to be generalized from a specific situation to something recognizable to others. To enhance efficiency, teachers should make a list of cases to be discussed at the start of the session. This allows for proper time management and provides clear reasons for cutting short long stories. If the conversation trails off, teachers should turn the focus back on track to the main issue, thus serving the educational end of this particular discussion. The following comment from a residence underscores the importance of this tactic:

> "Yes, here we're going back to […] the very practical, um, almost in the direction of giving tips. But just before this [happened], there was this nice interaction where [a resident] said, 'You know, I'm scared of what others think of me.' And then I think, yes, but that's where you [the teacher] can draw the line again. Then I think, ah if only you [the teacher] intervened at this point, we could keep it going and also, I think, go quite a bit deeper. But now a question pulls it from the deep back up to the superficial and then I think oh, what a pity. […] It was going so smoothly just now. […] It's a shame, that in the group or that a teacher, you know

[…] I think that if this point were taken up […] then you'd get there much faster, because it can take ages at times" (C811).

Though structuring is generally valued for contributing to efficient interaction, it can backfire by cutting short extensive exploration and dynamic detours in unpacking complex cases. Fixed procedures "remove all spontaneity and the learning curve, too" (B859), much like teachers intentionally withholding guidance leaves residents "swimming" (A831) for unseen shores. According to the residents, dynamic structuring nudges interaction efficiently on course toward value for all.

**Collaborative reflection: activities**

Residents' normative orientation to inclusivity, diversity, safety and efficiency in accomplishing educational value for all is reflected in their evaluations of activities that take place in the various phases of interaction: telling, exploration, discussion, and conclusion. Most attention (in terms of time spent in the recordings and number of evaluations in the interviews) is paid to the discussion phase. Telling and conclusion tend to be short phases, although the telling phase can be extensive if a resident's aim is to vent whatever is on their mind. The conclusive phase considers all phases relevant to educational uptake.

**Telling.** According to one resident, the potential of the telling phase is determined by the space it is allowed. Telling a story is an interactional accomplishment that requires a longer stretch of talk – ideally uninterrupted. As residents point out, interjections may contribute to efficiency by shortening verbose tellings, but at the same time undermine the functional freedom to take and be given "the space to vent anything and everything you want to share" (B851). Everyone else "shuts up and listens" (G856), withholding questions, opinions, advice, and judgments for later phases, thus constituting inclusivity and safety as the teller proceeds.

For a telling to have educational value, residents point to the importance of the 'tellability' and 'discussability' of the story. Not all experiences provide 'tellable' stories – in the sense that they have a point – and not all tellable stories are 'discussable' – in the sense that they either open up the grayish floor between guideline-white and unethical-black or induce a stirring of emotion ("at some point,

everyone gets triggered here", C806), betraying the participants' relation to the issue at hand. Against this norm, bringing up purely medical or procedural questions has limited value for some:

> "I think we either get to the solution very fast, […] following the guideline, or people have their own opinion and, yeah, they don't change [that] easily. That sort of stays the way it is" (G856).

Yet, stories on straightforward medical topics are sometimes considered tellable for their uniqueness ("most likely, others haven't come across this either", A715), which could make them perfect learnables to share with fellow residents. Whatever the topic, therefore, stories become *tellable* and *discussable* for residents whenever the stories address something that carries an urgency or relevance in terms of professional standards and competent practitioner behavior. Discussing that topic would contribute educational value for all the future doctors present.

**Exploration.** Following a resident's telling, participants usually ask for clarification, probing for additional information or to determine of which 'type' this experience is a 'token'. In residents' words, clarification helps to understand "how we can best help you" (G856) in the search for answers, recognition, or whatever is expected from this case discussion. In this phase, "directed, continuous attention to uncover the aim" of this telling is valued highly by several residents. As one resident observed, such attention directs the focus in complex stories and contributes to a useful learning uptake for the teller. Residents acknowledge the difficulty and importance of striking a balance between inclusivity/diversity and safety on the one hand, and efficiency on the other. One resident explains, "The one says this, the other says that, and in a way that's very positive. It ensures safety, and it's natural conversation, but to be a bit more constructive and time-efficient, it'd be good if once in a while someone called out, what's your question?" (B869). Structure, thus, is considered essential in this phase.

According to several residents, a huge upshot of this phase is the information it gives about how far the teller wants to disclose themselves. Exploration allows the group to "feel out" the teller (G856), while the teller is allowed to set limits. Taking enough time for "edging" toward the possibly

emotional core of the issue instead of "going smack bang" into it (G856) can be functional, even if less efficient: "If you go in directly with 'what does it do to you?' then it's rather confrontational. You may need some kind of detour to get more comfortable in that setting" (C811). Evidently, efficiency should sometimes be subordinate to safety in this phase.

Residents' evaluate the variety of exploratory questions that may be asked positively, turning to the importance of diversity for promoting understanding of the issue at hand:

> "Just like [name of fellow resident], who asked, 'What [kind of] help does she [the patient] actually want?' Well, I wasn't thinking about that at that point. So that again is an eye opener. And now I realize that, yes, wait, in this case the problem is […]" (A823).

The posed questions reflect the diversity of perspectives other residents may have: "very many different characters, people who react differently and have different ways of being a GP" (B859). Diverse contributions foster "good dynamics" and stops the group from "spinning its wheels [i.e. wasting time]" (B859), which again shows the residents' orientation to progress and efficiency.

**Discussion.** Usually, exploration naturally evolves into discussion, a much commented on phase in the interviews. According to the residents the discussion phase is where individual cases should be treated as tokens of a type by transforming the specific issue into a collectively relevant learning issue. One resident reported: "Here we're all thinking, oh this could happen to me too. What can we learn from this case to prevent it happening?" (A831). Highly valued contributions dive deeper into the issue to suggest potential causes, explore possible directions, and hint at solutions. Residents may share similar stories, which may function positively as a display of recognition and trigger a sense of 'we're all in this together', but can also divert the conversation onto a side-track with no added value. Still, those stories signal the relevance of the discussed issue to another resident, a factor valued as a marker of inclusivity and a clear benchmark of value *for all*.

Teacher participation is regarded as indispensable in the discussion phase. Although too much interference is unwanted, residents expect teachers to monitor the discussion for 'no go's' and to comment on unprofessional behavior. If they do not, one resident explained, "it would be like a GP

who's been in the business for years is approving it [unprofessional behavior]" (A831). Also, residents expect teachers to lead the discussion to topics they know to be important from first-hand experience:

> "Yes I do expect a teacher… what I really appreciate about these teachers is that they do lean back a lot and let things happen and also trust that we will be able to question each other and get somewhere. Um, but still, he [the teacher] is the hands-on expert. So, at some point I do want to know from him, yes, how does it work or how do you do that? […] Yes, that's what he's here for, isn't he?" (C811).

This resident points out two teacher behaviors that enhance educational value in this phase: (1) leave room for the group's process (which may be less efficient than strictly structured discussion directed straight at the learning issue), and (2) monitor the conversation and jump in with expert knowledge (the voice of experience) when needed. Both behaviors are presented as contributing to the group's learning process.

**Conclusion.** In this final phase, residents value a teacher's summary that highlights the 'learnables' of the discussion. This builds educational value for all, as it creates an opportunity to "collectively draw a personal note, the lesson from it" and also emphasizes any message of importance for the teller (A845). These summaries may be provisional, not intended to strike the final blow on *the* solution or outcome, but rather to call everyone's attention to the seeds that have been sown in the attempt to grow toward professional standards. Ideally, *each* resident present – perhaps the teachers as well – would find something *valuable* in each discussion. It could be a concrete solution, but an abstract 'nudge' or 'setting in motion' with long-term effects is more likely, according to this resident:

> "She's been asked so many questions that I assume she'll have to keep on processing [for a while]. The group doesn't have to give the answer. With all the questions she's been asked, she could come across someone, and then she might think, 'hey, that fits me precisely' or something. I think we can set things in motion right here, or get things going and let it go on outside [the group]. To put it bluntly, I think it seldom happens… you might be able to use a

tip from the group, but things are so personal that to really make it fit, even more so when it concerns very personal things, that almost never happens" (C811).

Whatever it may be, then, if you "get something out of it" (D700) either now or in the future, the discussion has proved its merit.

## Discussion

Based on our qualitative analysis of residents' evaluations of group reflection sessions in reflective video-stimulated interviews, we constructed a normative narrative about valuable collaborative reflection. Residents describe the potential of group reflection sessions as a layered construction of educational value for future practice for all. In their views, inclusivity, diversity, safety and efficiency are necessary conditions for transforming unique experiences into tokens of recognizable issues that are meaningful to discuss in the face of future practice. These conditions guide their evaluations of specific teacher and resident behavior throughout the case discussion.

The normative narrative constructed in our analysis is more than an idiosyncratic picture of a group of residents evaluating one group reflection setting. It reflects theoretical concepts and empirical descriptions of learning from practice, reflection, the value of group discussion, and the teachers' roles in all of these. The value of group interaction about experiences meaningful to future professional practice resonates with the narratives of both students and residents about small group reflection on practice experiences (Zou et al. 2019; Chen and Hubinette 2017). The group setting allows residents to *collaboratively* construct individually relevant 'learnables' (Koschmann et al. 1997; Veen and de la Croix 2017) that integrate diverse views on professional practice.

As becomes evident from the current findings, storytelling is a particularly powerful aspect of this process for two reasons. First, storytelling is the vehicle used to construct the reality of past experiences (Arminen 2004; Bruner 1991; Warmington and McColl 2017), which creates new ways to view the self, others, and the profession (Sandars and Murray 2009; Hardy 2017). Second, the identity work that is done through storytelling makes relevant the discussion of others' relation to themselves, the situation, and the future profession. Such shared meaning-making promotes the formation of

professional identities (Wald et al. 2015; Chen and Hubinette 2017). It forms the machinery, the mechanism, that creates educational value from a single experience.

One of the key factors in supporting professional identity formation is the presence of role models and mentors during reflection on experiences (Mann et al. 2009; Cruess et al. 2019). In our study, the key roles of teachers can be summarized as *providing expert input* and *moderating for structured spontaneity*. First, as role models, teachers were perceived as a valuable resource and tested benchmark for professional practice. Their expert position brings valued opportunities for pointing out inconsistencies, noticing and dealing with strong emotions, and probing for thought-provoking conversation (Sandars 2009). Second, teachers are expected to moderate for structured spontaneity (Van Braak et al. submitted). Spontaneity creates room for whatever is brought up for discussion (Veen and de la Croix 2016). It requires flexibility and improvisational skills from the teacher. Far from creating a dictated environment (Zou et al. 2019), the teachers' responsibility is to facilitate an open environment for learning. Though it may sound counterintuitive, residents in our study stated that clear boundaries and strict procedures (e.g., postponing judgment, setting privacy rules) create the space for vulnerability, confidentiality and trust (Gallagher et al. 2017). Whatsoever fits these boundaries is likely to contribute to the professional identity formation of the GPs to be.

The current synthesis of GP resident evaluations of group reflection sessions in a normative narrative develops our understanding of the educational aims of these professionals and their perceptions of ways to realize those aims using a new methodological approach. Two aspects of that approach strengthen the study's findings. First, during data collection, the interviewers limited their *prompting* of resident evaluations. In contrast to elicited responses, responses in our interviews indicate what the residents themselves consider relevant or noteworthy enough to report amid a sea of possible topics and observations that such one-hour recording could raise (van Braak et al. 2018). Also, as responses to recordings of actual interactions, the residents' evaluations were very *specific* (i.e., "*this* question is valuable at *this* moment, because it contributes to *this* aim"). Both features contribute to a detailed understanding of what is valued and why. Second, the value of our residents' evaluations is corroborated by the analytic move to synthesize evaluations and mechanisms of value in underlying shared normative orientations (Maynard and Heritage 2005). The resulting normative

narrative on valuable group reflection practices describes the general features of specific activities and behaviors that lend these their value. The general nature of these features makes the findings applicable beyond the specific evaluated situation. Also, their broad character allows teachers to engage with the findings considering their own practice, something a summary evaluation abounding in individual residents' ifs and buts would be unlikely to instigate.

Our methodological approach is an attempt to approximate Kirkpatrick and Kirkpatrick's evaluation ideal of interviewing "each student in the class" to ask "specific questions to dig deep and learn all that we wished to know"(Kirkpatrick and Kirkpatrick 2016). By distilling the normative orientations shared in these individual reflections on actual interaction, we were able to construct a *common discourse*. Such discourse is recognizable and relatable by all. Despite its affordances, however, the methodological approach also has two limitations.

First, conducting video-stimulated interviews is time consuming. In addition, it is expensive to hire external interviewers who, like the current non-medically trained interviewers, are not involved in group reflection teaching, even if they would be more likely to create a safe environment for critical evaluations than teachers would. Therefore, the details of our study's approach may not suit the limited time and resources available in educational practice. For application of this methodology to improve educational practice, we recommend a 'light' version of the approach. Even if just one or two participants reflect on education in 10-15 interviews about short recordings, their reflections would provide rich, empirically related 'snapshots' for teachers to respond to. Teachers could replay the scene or discuss the evaluations with students or peers. Provided that the residents' reflections are interpreted for what they really are (subjective, situational interpretations of education), these reflections likely stimulate teachers to (re)think and (re)design educational practices, thus fostering professional teacher development.

A second limitation is that our study examines *evaluations*, but these do not say anything about whether those evaluations are justified. That is, even highly valued teacher interventions may not have accomplished something educationally valuable for all present. Next, therefore, we plan to use the findings of our study as the basis for an analysis of the moments in the video that residents evaluated. When we examine what happened in the sessions at those moments, do we find that the

action that was evaluated in the interview had particularly negative or positive interactional consequences? This is our next research step in understanding valuable collaborative reflection interaction.

In conclusion, our synthesis of normative orientations displayed in residents' reflections on collaborative reflection shows how participant evaluations offer deep and detailed insight into their situational understanding of the local teaching context. Although residents are typically not experts in didactics (Stark and Freishtat 2014), their perceptions are an invaluable resource for understanding "how reflective learning within the curriculum can be better developed to increase engagement from learners" (Vivekananda-Schmidt et al. 2011, p. 1). As such, they form our key to unlock educational value for all.

## Practice Points

- The potential of group reflection is a layered construction of educational value for all: one situation, which is treated as a token of a type of experiences and discussed in relation to future professional practice.
- Storytelling is the machinery that lends reflection its educational promise: it is a powerful vehicle of sense making of past experiences and affords shared meaning making in ways that promote the formation professional identities.
- Residents value teachers' contributions to group reflection when they provide expert input and moderate the interaction for structured spontaneity.
- A normative narrative reflecting residents' evaluations of collaborative reflection offers deep and detailed insight into the residents' situational understanding of the local teaching context.
- A 'light' version of this methodological approach can be conducted by teachers to evaluate and eventually improve their specific aspects of educational practice.

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**Declaration of Interests**

The authors declare no conflict of interest.

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*Table 1*. Overview of recorded groups and interviews conducted per year/ institute. Each recording is denoted by an x, followed by the number of interviews about that recording.

| | Year 1 | Year 2 | Year 3 | **Total** |
|---|---|---|---|---|
| Institute A | x (1)<br>x (1) | x (1)<br>x (1)<br>x (1) | x (1)<br>x (1) | **7 (7)** |
| Institute B | x (2)<br>x (1)<br>x (2) | x (1)<br>x (1) | x (2) | **6 (9)** |
| Institute C | x (2) | x (2) | x (1) | **3 (5)** |
| Institute D | x (1) | x (2) | x (1) | **3 (4)** |
| Institute E | x (1)<br>x (1) | | | **2 (2)** |
| Institute F | | | x (2) | **1 (2)** |
| Institute G | x (1) | | | **1 (1)** |
| Institute H | | x (1) | | **1 (1)** |
| **Total** | **10 (13)** | **8 (10)** | **6 (8)** | **24 (31)** |

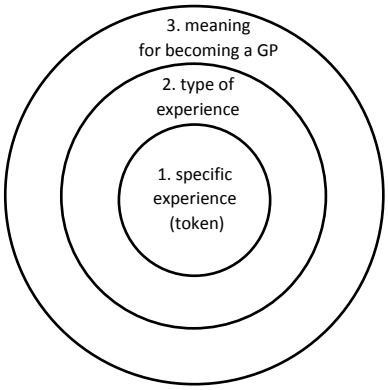


*Figure 1.* Graphic representation of the multiple layers of value derived from case discussions in the collaborative reflection setting.