REFLECTIONS

Why receiving feedback collides with self determination

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Abstract Providing feedback to trainees in clinical settings is considered important for development and acquisition of skill. Despite recommendations how to provide feedback that have appeared in the literature, research shows that its effectiveness is often disappointing. To understand why receiving feedback is more difficult than it appears, this paper views the feedback process through the lens of Self-Determination Theory (SDT). SDT claims that the development and maintenance of intrinsic motivation, associated with effective learning, requires feelings of competence, autonomy and relatedness. These three psychological needs are not likely to be satisfied in most feedback procedures. It explains why feedback is often less effective than one would expect. Suggestions to convey feedback in ways that may preserve the trainee's autonomy are provided.

Keywords Feedback · Self-Determination Theory · Clinical context

In clinical settings, trainees receive feedback often and in various formats. Many conversations include forms of implicit feedback, 'thanks for your help', 'next time, please add the lab results', 'be aware that this patient expects more interest of the doctor about her struggle with the back pain', 'you did a great job of examination, but forgot to weigh the kid; remember to always weigh dehydrated children'. Nothing seems easier and more natural than providing feedback that makes trainees learn something. True?

In 2004, McGill residents and clinicians at the department of surgery were surveyed whether feedback to trainees was provided adequately and sufficiently. The results were startling. Ninety-one percent of the surgeons felt that they were always or often successful

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at giving effective feedback, whereas only seventeen percent of the residents agreed with this contention (Liberman et al. 2005).

In the clinical settings, adequate feedback is considered essential for the progress of trainees (Ende 1983; Kilminster and Jolly 2000; Van de Ridder et al. 2008). Ericsson has made clear that frequent feedback is essential to build psychomotor skills (Ericsson et al. 1993). Feedback is considered necessary to develop self-evaluation ability, as individuals cannot build a correct image of the self without information from the outside world (Eva et al. 2004). Medical trainees consider a habit to provide regular feedback an important feature of a clinical teacher (Sutkin et al. 2008).

But feedback appears not always effective for improvement of performance (Hattie and Timperley 2007; Parkes et al. 2012). Why and when it is effective is an important field of investigation, as insight in what helps and hampers the feedback process can be of great value for the design of effective learning environments. Self-Determination Theory can make us understand why receiving feedback may not readily lead to an intrinsic motivation to improve behavior.

Self-Determination Theory

Self-Determination Theory (SDT), developed over the past decades by Deci and Ryan at the University of Rochester (Ryan and Deci 2000), holds that intrinsic motivation of human beings is stimulated and sustained by the satisfaction of three psychological needs: that of competence, autonomy and relatedness. A feeling of being *competent* stimulates to enact a skill. People often like to do what they are good at and to develop further what they already have mastered. *Autonomy* refers to the freedom to choose and self-determine one's actions. *Relatedness* refers to the desire to belong, and be rewarded and accepted as a member of a significant social grouping. This could be a family, peers, or a work environment. Research has shown that intrinsic or self-determined, autonomous motivation is positively associated with academic achievement and well-being and autonomy-supportive teaching supports this effect (Reeve 2002). According to SDT, motivation ranges over a spectrum of lack of motivation ("amotivation"), through different shades of extrinsic motivation, toward intrinsic motivation, and the context can help to internalize extrinsic rewards and develop self-determination of behavior. SDT holds that human beings have a natural tendency to grow toward autonomy, which development can be supported or hampered by the environment (Ryan and Deci 2000).

Understanding the feedback process through the SDT lens

As we struggle to understand why preceptors think they provide useful feedback, but learners to not recognize it as such, or to understand why feedback often does not result in measurable effects, looking at SDT may help (Ten Cate et al. 2011). What we really hope to encounter is trainees who appear delighted with constructive feedback, incorporate this in behavior change, seek new opportunities for feedback and show rapid improvement of proficiency in a cycle of experiential learning (Kolb 1984). We do not see this every day, to say the least. Could it be that major conditions for motivation to self-develop are seldom met in the way we usually provide feedback? A systematic look at the three psychological needs for intrinsic motivation and relating these to the feedback process may help.

Competence

Despite approaches to feedback that start with stressing the strengths of the trainee or that sandwich corrective feedback between supportive statements (Cantillon and Sargeant 2008; Pendleton et al. 1984), feedback is basically aimed at something to improve. We simply cannot expect that this will stimulate the development of intrinsic motivation in a way that acknowledgement of only strengths will do. In training situations, feedback is to help correct deficiencies of the trainee and improve skill and behavior. This is fully acceptable, but SDT predicts that it will not help in developing a feeling of competence, pride, and consequently, intrinsic motivation. At best, the addition of strengths has a balancing effect to make trainees not feel depressive about their overall competence. Students like a sandwich method, but it appears not very effective (Parkes et al. 2012). It requires self confidence to be already present, to cope well with corrective feedback. Most trainees have this ability and many will eventually use the information to develop, but we should not expect that it stimulates intrinsic motivation. It is success that breeds success, not failure.

Autonomy

The need for autonomy is usually not satisfied by the feedback process, particularly if a preceptor or the institution determines why, when and how feedback is provided. In this respect, SDT predicts that feedback will not readily lead to strengthening intrinsic motivation. Some authors have stressed the value of feedback seeking behavior of trainees (Teunissen et al. 2009). Such behavior concords with self-determined, autonomous behavior and should be highly valued if enhancing intrinsic motivation is the objective. But identifying a need for feedback on your own is difficult if you have not already received it from someone else. Weaknesses that trainees are not aware of may not lead to seeking feedback. Students are generally bad self-assessors (Eva et al. 2004) and may miss opportunities to get feedback, or ask for it when not necessary.

Relatedness

Relatedness refers to the feeling of connectedness to others, to caring for and being cared for by others and to having a sense of belongingness both with other individuals and with one's community (Deci and Ryan 2002). Receiving feedback is usually a social interaction. It is mostly provided in one-on-one situations or within a group. Cleary, social-psychological mechanisms then play a role. In the background of the information exchange, social relationships determine the provision and reception of feedback. Uttering feedback affects a relationship, and the words chosen by the feedback provider often reflect the way he or she would like to reshape or preserve this relationship.[1]

Trainees do not receive feedback free of emotion, but may add connotations: "this person does not like me as much as I hoped, I clearly do not live up to his or her standards, my less than optimal performance does not make me be considered full member of this community". All such aspects affect feelings of relatedness. And, as is the case with autonomy and competence, feedback that only reflects praise and admiration and thus

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[1] During many faculty development trainings of feedback I have observed that clinicians tend to convey feedback messages less honest and clear in role play than they intended just minutes before a feedback conversation, even in settings where their feedback skill is being observed.

would build strong feelings of relatedness is unusual and does not serve the purpose of stimulating further development and progress.

Discussion

Cleary, Self-Determination Theory predicts that much of feedback provided in clinical settings will not lead to enhancing the intrinsic motivation of trainees. Perhaps we should just accept this. In order to grow, motivation may at times just need to be extrinsically controlled and cannot always expected to be intrinsic. Feedback provided by significant others may lead to loss of face, which can be such a painful experience that students avoid to receive it (Hwang et al. 2002).

But it would indeed be wonderful and very productive if providing feedback could *also* stimulate intrinsic motivation. How can it be conveyed in a way that simulates, or at least does not harm feelings of competence, autonomy and relatedness?

As competency, autonomy and relatedness are, to some extent, socially determined, the role and position of the feedback provider seems crucial. But feedback can also be provided without a direct verbal intervention by a supervisor. In a study in Mendoza, Argentina, Estevez provided first year medical students with video recordings of their conversations with standardized patients. This was done in a small group of fellow students with similar recordings. The students were instructed to draw their own conclusions about their professional behavior, after seeing all recordings. This yielded significantly more awareness of strengths and weaknesses than when oral feedback was provided by preceptors to the group (personal communication Dr Pedro Estevez). Another example of this approach is the "Handover-Enabling Learning in Communication for Safety" project at UMC Utrecht, inspired by the work of Iedema in Australia (Iedema 2011). Teams of surgical and intensive care staff are provided with video recordings of live handovers from OR to IC staff, without normative evaluations. Members of the group preview the recordings, identify themes and request a video compilation of self-selected significant fragments that subsequently is discussed in the full teams (Van Rensen et al. 2010). In both examples, feedback is not provided with teacher or mentor interpretations and values, and hence does not interfere with the strength of relatedness to the feedback provider. Autonomy is also preserved. If feedback recipients feel free to draw their own conclusions, adapted behavior is their own choice and does not follow directions or suggestions by a preceptor. It may be wise to disentangle the role of assessor from the role of coach (Cavalcanti and Detsky 2011). Gawande recently showed how an autonomous initiative to hire his own coach made his surgical skill improve (Gawande 2011). Both Esteves' and Iedema's approaches provide learners with comparisons to enable learners to autonomously evaluate their own behavior. Seeing the behaviors of peers can affect their relatedness to them, but if no value statements are exchanged this may not be a serious drawback. The feeling of competence, or self-efficacy, finally, requires a comparison one's own proficiency against some standard. Bandura's work on self-efficacy (Artino 2012) also shows how feedback information may be derived from other sources than oral conversation ('verbal persuasion' in Bandura's terminology). Observation of one's own behavior ('enactive mastery experiences') and observing others ('vicarious experience') are other sources.

In conclusion, providing feedback is not likely to stimulate intrinsic motivation. If the feedback provision can be supplemented by information sources that exclude value statements of significant others, the autonomy of trainees may be supported (Kusurkar et al. 2011; Reeve 2002), which is much more likely to stimulate intrinsic motivation.

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