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Peer influence in clinical workplace learning

Raat, Adriana

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Document Version

Publisher's PDF, also known as Version of record

Publication date:

2015

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Raat, A. (2015). *Peer influence in clinical workplace learning: A study of medical students' use of social comparison in clinical practice*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen.

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Chapter 6

Dyad practice and the inevitability of social comparison

A.N. (Janet) Raat

Janke Cohen-Schotanus

In dyad practice, two students collaborate on a learning task that would normally be mastered individually; this is attractive because it makes lesser demands on instructors and cuts costs. Dyad practice, however, might be seen as second best on the basis that students deserve individual tuition. In this issue of *Medical Education*, Bjerrum et al.¹ present a well-designed, randomized simulation study which addresses this matter. The authors show clearly that students practising bronchoscopy skills in dyads learn as much as students practising the same skills individually, without taking up more time or instructor resources.¹ These findings offer instructors greater efficiency without detriment to students' learning.

To explain these results, Bjerrum et al.¹ invoke both psychomotor and cognitive factors. There is a psychomotor effect because students practising bronchoscopy skills in dyads have some physical and mental rest between attempts at handling the bronchoscope. The cognitive effect is that dyad practice provides opportunities to learn from observing the performance of a peer. From a sociological perspective, the fundamental difference between dyad and individual practice is that the former is social practice. The authors¹ suggest further research into how a dyad can form a well-functioning team. We would like to offer some insights from social comparison theory,² which could help frame such research because dyad practice entails social comparison.

Whenever people are confronted with information about the abilities of similar others – like peer students – they tend to relate this information to themselves, which is known as social comparison.³ Dyad learning, in which students alternate between practice and observation, almost inevitably leads to social comparison. For example, a student practising bronchoscopy motor skills might notice that the instrument comes into contact with the bronchial epithelium more often in his hands than in his peer's. The experience may go beyond a purely technical one and feed a desire to be as good as the peer or arouse a fear of lagging behind. Either way, the comparison makes the student take a closer look at the peer's manual performance or ask questions such as: 'How do you manage to avoid the wall?'

Seeing a peer succeed or fail at a clinical task influences a student's own idea of mastering that task.⁴ Such ideas about one's own abilities to perform meets Bandura's description of self-efficacy.⁵ In learning situations, self-

efficacy is positively related to learning outcomes because it has an effect on students' aspirations, goal setting, selection of activities, and perseverance during difficulties. Students estimating their ability to master a clinical task frequently compare themselves with their peers.⁴ These peers are the most useful others for the purposes of comparison because they are equally experienced practitioners at a similar level in the clinical hierarchy. Thus peer comparison plays an important role in guiding the student along the trajectory of becoming a doctor.

Students' use of social comparison is in line with Wenger's explanation of learning in communities of practice.⁶ Students who share the idea of becoming well skilled professionals compare themselves with one another in order to appraise their progress and find out what brings them closer to the centre of the community. The preferred comparator is a peer who is perceived as doing slightly better.⁷ Such so-called upward comparisons are beneficial for several reasons: they provide useful information about how to improve, give people a sense of their own potential, and may lead to higher personal standards. Downward comparisons, with peers perceived as doing less well, may also be valuable because they strengthen self-confidence and motivation. Therefore, a joint activity like dyad practice, which tacitly stimulates students' use of social comparison, seems worth encouraging.

Still, students' comparison behaviour is a relatively unknown component in medical education, which may have some hidden risks and benefits. Previous research leads us to suppose that students practising skills in dyads vary in their individual inclinations to compare.⁶ Such variance is explained by individual differences in characteristics such as ambition, empathy and uncertainty,⁸ which make the outcomes of comparisons more or less positive.

Comparison outcomes are also influenced by both similarities and dissimilarities between the student and his or her comparator peer.⁴ We note that Bjerrum et al.¹ barely comment on the constitution of their dyads, although this is pivotal to the comparison process. The extent to which a student experiences identification with the comparison peer, or evaluates him/herself by contrast with that peer affects the comparison outcome. For example, a comparison with a peer perceived as performing slightly better is generally valued positively. However, the comparison becomes risky if the

peer's level of performance is too far out of reach. In that case, the comparison may arouse feelings of inferiority and distress, which hamper learning. Likewise dissimilarities on factors such as gender, age and experience affect comparison outcomes.⁴

In conclusion, Bjerrum et al.¹ provide strong evidence that dyad practice is as effective as individual practice and more efficient. When we think of dyad practice in terms of social comparison, we think of students monitoring their own progress by comparing themselves with a peer. We urge educators to be aware of students' tendencies to make comparisons with their peers and the consequences of them doing so. A better understanding of this process may be relevant to contemporary social learning theories and the development of professionalism.

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