



# Healthcare facilitators' and students' conceptions of teaching and learning – An international case study



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## ABSTRACT

Conceptions of teaching and learning affect approaches to teaching, learning and learning outcomes, and they therefore need to be made explicit. This study addresses how healthcare simulation facilitators and students view teaching and learning. Qualitative data from 43 participants in the field of healthcare was analyzed using the qualitative-content analysis method. The results revealed three distinct categories of conceptions of teaching and learning as well as two categories of conceptions of teaching within the context of a simulation-based learning environment. This knowledge can be used to understand and modify healthcare facilitators' and students' conceptions in order to enhance the learning experience.

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## 1. Introduction

It is necessary not only to develop innovative and modern learning environments, but also the pedagogical basis of such environments. As Entwistle and Peterson (2004) write, even the most innovative learning environments will support learning only if they are also based on well-established educational principles (p. 425). Vermunt and Vermetten (2004) also state that the need for innovative and constructive teaching methods is increasing, because people are becoming dissatisfied with more traditional educational programmes that are based on teacher control and knowledge transfer. In medical education, virtual reality (VR) and simulation-based learning environments (SBLEs) are highly appreciated, since they have been shown to provide students with experiential learning opportunities and realistic environments in which to practice the actual work of healthcare personnel (Cleave-Hogg & Morgan, 2002; Kneebone, 2003; Rosen, 2008). According to Rall and Dieckmann (2005), "simulation, in short, means to do something in the 'as if', to resemble 'reality' (always not perfectly, because then it would be reality again), e.g. to train or learn something without the risks or costs of doing it in reality" (p. 2). In this study, the term VR is used to refer to a combination of techniques that are used to create and maintain real or imaginary environments (Cobb & Fraser, 2005; Riva, 2003).

However, new types of learning environments like VR and SBLEs require teachers to change their teaching practices and adapt their roles to become a facilitator of student learning (Keskitalo, 2011; Lonka, Joram, & Bryson, 1996; Lowyck, Lehtinen, & Elen, 2004). In addition, in order for students to understand their subject matter, they need to be able to change their views

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of teaching and learning and their approaches to studying, which have often been developed in traditional learning environments, such as classrooms or lecture halls (Kember, 2001). This task is not easy, since these personal and experience-based conceptions of teaching and learning are quite resistant to change (Entwistle & Peterson, 2004; Lonka et al., 1996) and are often ill-suited to new kinds of learning environments. Conceptions of teaching and learning affect approaches to teaching and learning, as well as the learning outcomes (Entwistle, Skinner, Entwistle, & Orr, 2000). Both teachers' and students' conceptions of teaching and learning have been studied fairly extensively since 1979 across different fields of enquiry and at different educational levels. However, most of the work was done within university settings, following Säljö's (1979) publication of a pioneering study on the conceptions of learning. The expansion of constructivist theories has since extended this line of research (e.g. Entwistle & Peterson, 2004; Lonka et al., 1996; Loyens, Rikers, & Schmidt, 2009; Marton, Dall'Alba, & Beaty, 1993; Tynjälä, 1997). There has been little published research on conceptions of teaching and learning among healthcare teachers and students. The present study therefore examines both teachers' and students' conceptions of teaching and learning within the specific arena of healthcare SBLE. Currently, it is not fully known how learning occurs in this type of environment, nor how to optimize that learning (Cook et al., 2011; Helle & Säljö, 2012). This study stresses the importance of facilitators' and student's conceptions of teaching and learning, which can be important determinants of their teaching or learning experience and outcomes.

As part of a larger study involving the development of a pedagogical model for VR and SBLEs in the field of healthcare employing design-based research (DBR) method (Brown, 1992; Collins, Joseph, & Bielaczyc, 2004; Design-Based Research Collective, 2003; see also Keskitalo, 2011; Keskitalo et al., 2010, 2011), the data was collected using various methods from two different continents in spring 2009 and 2010. The study included 13 facilitators and 30 students in the field of healthcare. Qualitative data was analyzed using the qualitative-content analysis method (Brenner, Brown, & Canter, 1985; Graneheim & Lundman, 2004) to answer the research question: *How do healthcare facilitators and students view teaching and learning?* In the present study, teachers are referred to as facilitators, since the role of a teacher in an SBLE is more focused on facilitating student learning. In terms of the development of a pedagogical model, it is expected that this research will provide important insights into how to design instruction within SBLEs that would better meet the needs and expectations of students and facilitators for teaching and learning.

The following sections introduce the theoretical background, research question and methods, and present the results. The results are then discussed and the implications for educational practice and future research are given.

## 2. Theoretical framework

### 2.1. Prior empirical work on conceptions of teaching

Within the present study, the phrase 'conceptions of teaching' refers to facilitators' and students' assumptions and beliefs about teaching (e.g. Vermunt & Vermetten, 2004). These conceptions are also referred to as mental models or beliefs (Vermunt, 1996; Kember, 1997). A conception can generally be understood as a framework within which an individual interprets and understands a certain phenomenon. As has been noted, conceptions are both intuitive and personal, since they are developed through experience (Entwistle & Peterson, 2004; Lonka et al., 1996; Loyens et al., 2009; Vermunt & Vermetten, 2004). Some researchers have suggested that conceptions are relatively stable and resistant to change (Entwistle & Peterson, 2004; Richardson, 2011), while others have argued that they can be affected by certain kinds of instruction and learning environments (e.g. Cano, 2005; Keskitalo, 2011; Lonka et al., 1996; Postareff & Lindblom-Ylänne, 2008; Postareff, Lindblom-Ylänne, & Nevgi, 2007; Tynjälä, 1997; Vermunt & Vermetten, 2004). Most importantly, these conceptions affect teachers' approaches to teaching, which, in turn, are related to students' approaches to studying and their academic performance (Kember, 1997). Previous studies have identified several categorizations of conceptions of teaching (see Table 1), which resemble each other to some extent.

Previous studies have defined two broad categories of conceptions of teaching: 'teaching as transmission of knowledge' and 'teaching as learning facilitation' (Kember, 1997, 2001; Kember & Kwan, 2000; Postareff & Lindblom-Ylänne, 2008), and some have argued that all the other conceptions discussed in previous research fall somewhere between these two (Kember, 1997). The first category includes the sub-categories of 'teaching as passing information' and 'teaching as making it easier for students to understand', and the latter category includes the sub-categories of 'teaching as meeting students' learning needs' and 'teaching as facilitating students to become independent learners'. The conception of teachers as knowledge transmitters is typical of teachers who have adopted a teacher-centred approach to teaching, whereas the view of teachers as facilitators of students' learning is a common conception among teachers who have adopted a student-centred approach to teaching (Kember & Kwan, 2000; Postareff et al., 2007; Postareff & Lindblom-Ylänne, 2008). Generally, the teacher-centred view of teaching, is that knowledge is constructed by the teacher and evaluated via quantitative means, whereas in the student-centred view, the aim is to facilitate students' learning using a broad repertoire of teaching and assessment methods. Earlier studies have shown that if teachers adopt a teacher-centred approach to teaching, students are likely to adopt a surface approach to learning: that is, memorizing facts or remembering the course content. However, if teachers adopt a student-centred approach to teaching, students are likely to aspire to a deeper understanding of knowledge (Boulton-Lewis, Smith, McCrindle, Burnett, & Campbell, 2001; Entwistle et al., 2000). Lueddeke (2003) reported that these approaches were somewhat domain-specific, while Kember (1997) found that students tended to prefer courses that were in line with their own conceptions and approaches. In addition, Keskitalo (2011) found that healthcare teachers generally saw

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