A Web-Based Guiding Framework for Student Teachers’ Self-Reflective Practice

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ABSTRACT

Self-reflection based on the analysis of one’s own teaching performance has proven to be a powerful method for developing student teachers’ professional knowledge. The aim of this study was to investigate how a web-based guiding framework involving the use of a pedagogical tool for planning and reflection in conjunction with annotated video recorded lessons, written reflections, and a teacher educator’s feedback, might provide a beneficial method for student teacher self-reflection. The study included 56 student teachers performing their in-service training in science teaching. The student teachers completed a questionnaire where they had to respond to statements about their experiences of the framework. The results indicate that a guiding framework that includes analysis of video-recorded teaching is essential for a self-reflective process to become effective. Further development of the framework might be to enable student teachers to participate in synchronous discussions with peers and teacher educators about their video-recorded lesson.

KEYWORDS

Content Representation, Guiding Framework, Reflective writing, Self-reflection, Teacher Education, Video Analysis, Video Annotation, Web-based Learning

INTRODUCTION

Educational technologies provide new ways of organising teacher education and allow for extramural activities. Several web-based methods for enhancement of student teachers’ didactic strategies have been projected (e.g., Garcias & Marín, 2017; Kong, Shroff, & Hung, 2009; Nagro, deBettencourt, Rosenberg, Carran, & Weiss, 2017; Rich & Hannafin, 2009). Easily accessible digital technologies such as video and video annotation tools offer the potential to support subsequent analysis and reflection of teaching.

When creating conditions for student teachers’ learning to teach, a significant challenge lies in finding effective strategies to assist them in developing pedagogical skills to make the content visible and to adjust it to their learning needs. In teacher education, a common approach to ensure student teachers’ professional development is to engage them in self-reflection on their own teaching performance and provide them with feedback on their reflected teaching situations (e.g. Nilsson & Loughran, 2012). Traditionally this has been accomplished by a teacher educator attending a lesson,

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led by a student teacher and followed up with a subsequent discussion about the student teacher’s performance. Educational technologies provide new opportunities for reflection and in-depth analysis of classroom practices. Especially, videotaped lessons have proven to be a valuable tool for capturing teaching episodes, subsequent reflection and development of educational skills (Coffey, 2014).

Scrutinising video-recorded teaching sequences allows for student teachers and teacher educators to reflect on and analyse teaching performance in retrospect in an authentic classroom context. Videotaped lessons have long been used to provide a useful means for capturing teaching episodes and to serve as a point of reference for reflective purposes. Especially, in teacher education, videotaped lessons have proven to be a valuable tool for subsequent reflection and development of educational skills (Coffey, 2014; Harlin, 2014; Kong et al., 2009; Nilsson, 2008). Student teachers have been reported to develop previous habits as well as to apply new habits as a result of video enabled reflection, and in this process being able to draw attention to aspects that they would not have noted from memory alone (e.g. Harlin, 2014).

In this paper we describe a guiding framework to support student teachers’ self-reflection. All stages build on electronic communication, forming it into a web-based method. This use of a web-based method makes planning and retrieval of video data for self-reflective analysis executable through the use of remote access over the web. More specifically, this web-based guiding framework increases the access and enables student teachers to analyse their footage from any computer via the web. Such a way of organising student teachers’ reflective work during their practicum in teacher education, represents a transition from traditional approaches to more technology-based systems for capturing and developing professional knowledge.

This study contributes to previous research in the field of web-based guiding frameworks (e.g. Kong et al., 2009) by combining the use of a four-dimensional framework for self-reflection. The provision of a web-based guiding framework like this for self-reflection aims to help student teachers to develop and externalise their thoughts, with a shared language and shared understanding amongst the professional community within their own teaching training institutions. This approach has the potential both to advance understanding of student teachers’ professional knowledge and to improve a crucial component of teacher education. Having student teachers explicitly to articulate their reasoning at three key points of a plan-teach-reflect cycle we consider important for a) describing the types of knowledge used in these teaching practices and b) observing how student teachers reflect on aspects of their teaching likely to influence their professional knowledge.

BACKGROUND

A guiding framework for self-reflective practice is considered crucial for student teachers to make systematic and in-depth self-reflection on their teaching performance (e.g., Blomberg, Sherin, Renkl, Glogger, & Seidel, 2014; Cook & Duquette, 1999; Kong et al., 2009; Parsons & Stephenson, 2005). It is not enough just to provide opportunities for student teachers to develop their reflection skills. Instead, such opportunities need to be very purposeful in order to facilitate the development of these skills.

Video-stimulated recall has for many years been a broadly used strategy to review or evaluate student teachers’ performance (e.g. Blomberg et al., 2014; Bryan & Recesso, 2006; Calandra, Brantley-Dias, Lee, & Fox, 2009; Coffey, 2014; Gonzalez, 2017; Martin, 1987; Miller & Zhou, 2007; Parsons & Stephenson, 2005; Rosaen et al., 2010; Yerrick, Ross, & Molebash, 2005). Already 30 years ago Martin (1987) used video-stimulated recall and found it to be effective for evaluating student teachers’ instructional behaviours. Calandra et al. (2009) studied guided video reflecting activities and found it to facilitate novice teachers’ reflection on their professional development. To promote undergraduate student teachers’ professional development Gonzalez (2017) used video-elicited reflection on their instruction. Findings from this study showed the importance of continuous use of video annotation and instructional coaching as scaffolds to promote student teachers’ pedagogic learning. However,
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