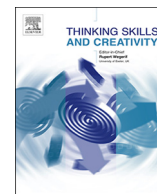




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Thinking Skills and Creativity

journal homepage: www.elsevier.com/locate/tsc

Productive framing of pedagogical failure: How teacher framings can facilitate or impede learning from problems of practice

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ARTICLE INFO

Keywords:

Productive failure
Teacher learning
Problems of practice
Frame
Collaborative learning

ABSTRACT

This case study explored the educational benefits that can be gained from experiencing and sharing pedagogical failure. It examined the potential of an instructional failure to open up opportunities for teachers' collaborative learning and the development of their adaptive expertise. Applying linguistic ethnographic methods and frame analysis, we focused on an audio-recorded team meeting of mathematics teachers discussing a videotaped ninth-grade geometry lesson. The videotaped teacher shared the lesson with her colleagues to explore her failure to teach her students how to write a two-column proof. We show how the team's discussion of their colleague's failure opened up an opportunity to critically reflect on a standard practice and advance their pedagogical sensitivity, interpretation, and repertoire. However, this opportunity was not fully realized because of the team's failure to productively frame the failure. The findings highlight the role of socio-emotional obstacles, such as face-work and coping with uncertainty, in framing failure and in turning an individual instructional failure into a collaborative opportunity for teachers to learn. The study expands our understanding of how failure experiences can be beneficial in educational contexts by underscoring the centrality of framing processes in managing socio-emotional obstacles. It suggests that educating teachers about productive framing of failure and ways to support it is imperative for failure experiences to promote learning.

1. Introduction

“On-the-job” collaborative discussions of professional problems and failures have shown great promise for honing adaptive teaching expertise (Horn & Little, 2010; Lampert, 1985; Lefstein & Snell, 2014). However, realizing the potential of learning from instructional failures and problems of practice is no easy task. Scholars have addressed this challenge, highlighting cultural, social, cognitive, and emotional obstacles (Grossman, Wineburg, & Woolworth, 2001; Hargreaves & Shirley, 2009; Horn, Garner, Kane, & Brasel, 2017; Little & Horn, 2007), such as teachers' reluctance to share problems of practice (Little, 1990) and lack of conceptual resources to consider the local practice in light of broad theoretical ideas (Horn, Kane, & Wilson, 2015). We add to this line of research by examining how one teacher team discussed their colleague's failure in teaching a geometry proving method. This teaching failure opened up opportunities to enhance teacher learning about the failing strategy in particular, as well as to generally develop the team's adaptive expertise. However, the potential of this failure to advance learning was only partially realized. To understand what enabled learning from this failure and what limited it, we analyze how the team framed the failure (Goffman, 1974). The findings expand our understanding of how failure experiences can be beneficial for teacher learning by illustrating both what

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<https://doi.org/10.1016/j.tsc.2018.01.002>

Received 30 June 2017; Received in revised form 29 January 2018; Accepted 29 January 2018

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benefits the failure entails and how they can be obtained or hindered.

The article begins by explaining our approach to teacher learning with a review of the literature on productive teacher discourse and its extension to frame-analysis theory. We then set the context of the team meeting we analyze, followed by an analysis of the problem frames that emerged in the meeting. We conclude with a consideration of the analysis' implications for the research and practice of teacher learning from failure.

1.1. Teacher learning from problems of practice

Good teaching is neither intuitive nor easily acquired. Teachers constantly contend with the many complexities of the educational setting: student needs; disciplinary content; institutional requirements; and more (Labaree, 2000; Lampert, 1985). Therefore, good teaching requires adaptive expertise that includes *sensitivity* to critical moments, ability to *interpret* situations, a *repertoire* of courses of action to draw on, and *judgment* regarding instructional decisions (Lefstein & Snell, 2014). For example, to effectively respond to difficulties in teaching a geometry proving method (i.e., a method to deduce geometrical conclusions), a teacher must first identify the difficulty by noticing student low participation. She must then interpret that low participation, considering different explanations: Is it the result of difficulty with reasoning from propositions, the proving format, or how she designed the classroom discussion? To respond, she must weigh possible courses of action (e.g., different approaches to teaching this proving method or teaching different forms of proving) and choose the most appropriate alternative.

Teacher adaptive expertise can be developed through critical exploration of ill-structured authentic problems of practice, including failures (Lefstein & Snell, 2014; Zhang, Lundeborg, & Eberhardt, 2011). Problem-based-learning approach to teacher professional development takes into account the complexities of teaching, its highly contextual nature and inherent uncertainties, the multiple and often contradicting goals, and the centrality of tacit professional knowledge (Labaree, 2000; Lortie, 1975). This is at odds with the “best practice approach,” which assumes that effective teaching methods can be effectively implemented across contexts (Shavelson & Towne, 2002; Slavin, 2002). According to the problem-based-learning approach, in addition to learning, observing, and implementing prevailing “best practice” for teaching proving, teachers may gain much from scrutinizing cases of failures in teaching proving. This can afford them “the opportunity to develop a different kind of knowledge for teaching—knowledge not of ‘what to do next,’ but rather, knowledge of how to interpret and reflect on classroom practices” (Sherin, 2004, p. 14).

Scholars maintain that exploring problems of practice is imperative for teacher learning (Little & Horn, 2007). They suggest that teachers' explorations of problems of practice are most productive when they: (1) connect between teaching, learning, and subject-matter (Horn & Little, 2010); (2) are anchored in rich representations of classroom practice, such as classroom videos or student artifacts (Little, 2003; Sherin & van Es, 2008); (3) examine ways to contend with the problem, based on analyzing and understanding it (Borko, Jacobs, Eiteljorg, & Pittman, 2008; Horn, 2005); (4) position the teacher as capable of coping with the problem (Horn & Little, 2010); and (5) are collaborative (Grossman et al., 2001). In what follows, we elaborate on the affordances and constraints of collaborative exploration of problems and failures.

1.2. Professional development as collaborative learning

The promise of teacher collaborative learning derives from the socio-cultural premise that interaction can foster collective construction of pedagogical knowledge and professional thinking skills (Cochran-Smith & Lytle, 1999; Popp & Goldman, 2016; Putnam & Borko, 2000). It takes more than just bringing teachers together to create an opportunity for learning and improving practice. Cochran-Smith and Lytle (1999) conceptualize collaboration as an effort to advance teachers' knowledge-of-practice by embracing inquiry as a stance so that they collaboratively question their pedagogical premises, teaching practices, and curriculum. It is not simply a process of sharing experiences, storytelling, or adding new layers of strategy (Darling-Hammond & Richardson, 2009; Little, 1990). Teacher talk generates professional learning “to the extent that it invites disclosure of and reflection on problems of practice” (Little & Horn, 2007, p. 91; see also Levine & Marcus, 2010; Vangrieken, Dochy, Raes, & Kyndt, 2015).

Engaging in collaborative critical exploration of problems and failures requires confidence and willingness to openly discuss them without fear of conflict or diversion of blame. It is crucial that the group takes collective responsibility for its progress, sharing and explaining ideas, questioning and challenging each other, and exploring differences and conflicts (Grossman et al., 2001; Popp & Goldman, 2016).

Yet there are numerous possible obstacles to teacher collaborative learning, particularly problem-based learning. These include: deficient conceptual resources (Horn et al., 2015); norms of privacy and isolation (Little, 1990; Lortie, 1975); presentism (Hargreaves & Shirley, 2009); normalization (Little & Horn, 2007); avoidance of disagreements (Grossman et al., 2001); and preference of information-exchange and sharing of tips and stories over critical reflection and problematization (Horn et al., 2017; Segal, Lefstein, & Vedder-Weiss, 2018). Deliberating on professional failure with colleagues is socially and emotionally challenging. It exposes the “failing” teacher to her colleagues' criticism, thereby jeopardizing her professional status and public image or face (Goffman, 1955; Vedder-Weiss, Segal, & Lefstein, 2016). Furthermore, acknowledging and scrutinizing failure generates what might be perceived as an undesirable state of professional uncertainty (Helsing, 2007).

1.3. Productive framing of teacher failure

Various productive and impeding meanings can emerge from discussing failures or problems of practice. These meanings can be managed in a variety of ways, one of which is through problem framing. Framing is the process by which meanings are generated by

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