

Chapter 54

The Role of Early Learning Experience in Shaping Teacher Cognition and Technology Use

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ABSTRACT

This chapter explores the role of teachers' early learning experiences in shaping their pedagogical beliefs and practice specifically in relation to technology use. Following a case study approach, the accounts of three in-service Arabic language teachers from a private institution of higher education in Cairo, Egypt, were examined. Practitioners with years of professional experience are not expected to have encountered elements of technology as we know today in their schooling. Nevertheless, findings suggest that conceptions formed early in life of what constitutes "good" or "bad" teaching act as filters through which new experiences, including the use of digital media, are internalized. As imprints of early learning experiences are manifested in teaching, it is the responsibility of teachers to look back on them for possible influences on their pedagogical theories. In complementary fashion, the study foregrounds the role of teacher education in mediating initial conceptualizations of teaching and learning and accentuates the value of reflective practice for continuing teacher development.

INTRODUCTION

This chapter explores the impact of early learning experiences in shaping teachers' cognitions as reflected in their use of educational technologies. The text builds on existing literature on teacher cognition and teacher education. Research into these fields has undergone a remarkable expansion in recent years, though it has not yet sufficiently addressed the relationship between teachers' learning histories, cognitions, and technology use. Subsequent sections explore this relationship with a view to furthering our understanding of this area of inquiry.

DOI: 10.4018/978-1-5225-0164-0.ch054

BACKGROUND

Evidence from the literature suggests that teachers' pedagogical beliefs are highly affected by their early experiences as learners (Greene, 1984; Pajares, 1992; Johnson, 1994; Numrich, 1996; Richards & Lockhart, 1996; Windschitl, 2002; Borg, 2003, 2006, 2009; Ertmer & Ottenbreit-Leftwich, 2010; Farrell, 2009; Graves, 2009). Introduced by Lortie (1975), the term *apprenticeship of observation* refers to the lasting impact that schooling experiences have on teachers' pedagogical beliefs (p. 61). The thousands of hours that learners spend in classrooms familiarize them with the details of teaching, and initiate a process of socialization, so that those who later choose to become teachers enter the profession with preconceptions founded upon strong identifications (ibid. pp. 66-67). Through daily observation of teachers at work, perceptions of what constitutes 'good' or 'bad' teaching are internalized and, with time, reinforced. Apprenticeship of observation is, therefore, complex (Russell, 2008), highly resistant to change (Loughran, 2005; Loughran & Russell, 2007), and not to be underestimated (Bullock, 2009), as it informs the way practitioners respond to different teaching situations (Flores & Day, 2006).

Recognizing the impact of early imprints on pre-service teachers' pedagogical beliefs, Lortie (1975) argues that "the mind of the education student is not a blank awaiting inscription" (p. 66). He explains that understandings developed during apprenticeship of observation, and later carried on, are likely to be limited, mainly because learners are not privy to teachers' decision-making processes, and therefore, may not be fully aware of the intricacies and complexities of the teaching profession. Along the same lines, Darling-Hammond (2006) identifies apprenticeship of observation as one of the main challenges to teacher education, largely because teacher candidates often need to conceptualize teaching in ways that are different from their own early experiences as learners.

Research on the imprints of apprenticeship of observation has chiefly been undertaken in the context of pre-service teachers, yet the effect of past schooling experiences on teacher cognition is also evident in former studies on in-service teachers (Golombek, 1998; Numrich, 1996; Woods, 1996), as well as in research on in-service teachers' pedagogical theories about technology integration. For example, Ertmer (2005) argues that since only a few teachers witnessed the use of technology, as we know it today, in the early years of their schooling, they may not hold preconceptions about how it is used to support student learning. Nevertheless, she adds that their use of new educational tools will be filtered through established beliefs about teaching and learning, and in this respect, teachers' perceptions of Information and Communication Technology (ICT) will not differ greatly from their perceptions of other teaching resources or methodologies. Lim and Chai (2008) present a similar argument in the context of their research on schoolteachers in Singapore. They explain that since the construction of teachers' pedagogical beliefs begins early in life, teachers who went through "traditional" schooling may hold beliefs that reflect elements of this kind of education, and only discern affordances that are congruent with these beliefs.

That apprenticeship of observation is supported by a myriad of studies does not mean that it has escaped criticism. Mewborn and Tyminski (2006) argue that Lortie makes "a rather grand claim" about the way the teaching practice is transmitted (p. 30). In their opinion, this socialization model is not sufficiently robust and has repeatedly been used to account for substandard teaching and the ineffectiveness of teacher education programs. The researchers conclude that if this model is to be credible it should also examine how quality teaching is reproduced, how some teachers transform unfortunate schooling experiences into favorable ones, and how the cycle of bad teaching can be broken.

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