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Shifting pedagogy in an AP US government & politics classroom: A DBIR exploration of teacher growth

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HIGHLIGHTS

- Design Based Implementation Research supports teachers' growth for complex reform.
- Longitudinal case study provides a rich description of teacher growth.
- Connecting innovative practice and research improves teaching and informs theory.

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ABSTRACT

This paper presents a longitudinal case study of a teacher, over four years, as he participated in a design-based implementation research (DBIR) project aimed at implementing a rigorous project-based learning (PBL) Advanced Placement U.S. Government and Politics (APGOV) course in an urban school district. Teacher interviews, professional development sessions, and classroom observations offer a window into how DBIR afforded the teacher unique opportunities to adapt and shift his pedagogical practices and beliefs around PBL in the classroom. Findings suggest the iterative nature of DBIR can serve as an important conduit to study what supports teacher learning over time.

1. Introduction

Picture a typical professional development (PD) session introducing teachers to a new curriculum and instructional approach: A group of teachers spend four days learning about a new curriculum they agreed to implement. A week later the teachers reconvene in a classroom, resolved to make sense of the mountain of materials and figure out how to realistically translate the PD into practice. Several weeks later the teachers begin implementing the course, unsure if they have interpreted the materials correctly or how the curricular approach will work with their students.

Too often, teachers struggle to grow in their practice as they make sense of and implement new instructional strategies or curricula. Many reform efforts have historically been packaged as professional development "one-shot workshops," where teachers are asked to incorporate new ideas into their classrooms after brief training (Goldenberg & Gallimore, 1991). This perspective can frame PD as a directive in teacher learning—whereby the PD presents it, so teachers implement it. But what supports teacher learning through and beyond PD sessions? That question is at the heart of this case study, which delves deeply into one teacher's experiences over four years in a complex reform effort.

1.1. Teacher learning

Teacher learning is increasingly seen as key to successful reform efforts that aim to improve school quality and student learning (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009; Desimone, 2009; Lieberman & Pointer Mace, 2008; Putnam & Borko, 2000). In this paper, we view change as an indicator of learning[1] and an expected outcome of "the professional activity of teachers and school" (Clarke & Hollingsworth, 2002, p. 948). The

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[1] Recognizing some literature distinguishes between learning and growth, in this paper we refer to learning and growth interchangeably because we are focusing on both the situative and cognitive aspects of a teacher's shifting pedagogy.

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question, then, is what is the nature of change? There is little agreement in the literature about how teachers' thinking and practices change in ways that align with the reforms at hand (Kazemi & Hubbard, 2008). While evidence suggests asking teachers to implement complex practices requires ongoing and responsive PD (Little, 1993; Shulman, 2004), theories of teacher learning have only recently begun to guide approaches to PD (Borko, 2004; Desimone, 2009; Penuel & Gallagher, 2009; Penuel, Fishman, Yamaguchi, & Gallagher, 2007). Perhaps for this reason, theories about teacher learning are frequently implicit in the design of professional development, where qualities deemed effective for professional learning (e.g., having a content-focus or incorporating collaborative work) are often emphasized without clear connections to intended PD learning outcomes (Desimone, 2009; Garet, Porter, Desimone, Birman, & Yoon, 2001; Richardson & Placier, 2001).

Teacher learning, as a result of PD, is often thought about in unidirectional terms, initiating in PD (point A) and enacted in the classroom (point B). Such a unidirectional vision of teacher learning often leaves the element of *time* at the wayside, when we know that "intellectual and pedagogical change requires professional development activities to be of sufficient duration, including both span of time over which the activity is spread (e.g., one day or one semester) and the number of hours spent in the activity" (Desimone, 2009, p. 184). Corcoran, McVay, and Riordan (2003) also noted the clear effect of cumulative PD on teacher practices and thinking over two to three years of sustained opportunities for professional development on inquiry-based instruction, a finding supported by other studies (e.g., Butler, Lauscher, Jarvis-Selinger, & Beckingham, 2004; Desimone, Porter, Garet, Yoon, & Birman, 2002; Schneider, 2013). Further, Guskey and Yoon (2009), in their review of professional development research, noted that follow-up support is essential for teachers to be able to adapt and implement complex curricula or instructional practices. This study seeks to examine the reciprocity between professional development (and the researchers who design and implement the PD) and the classroom (and the teachers who enact practices) over time, an area in need of additional research (Kazemi & Hubbard, 2008).

1.2. Teacher learning in the context of project-based learning

We examine teacher learning in the context of project-based learning (PBL), which is characterized by presenting learners with an authentic problem to solve and focusing on "application-based outcomes" (Ravitz, 2009). In a meta-analysis of problem-based learning,[2] Walker and Leary (2009), identify four components which constitute the minimum standards of PBL: problems with multiple solutions, a student-centered approach, teachers as facilitators of the learning process, and a clear connection to the real world. Teachers may struggle with adapting and implementing PBL curricula because PBL involves a complex web of teaching skills, pedagogical knowledge, and content knowledge. Although some empirical studies examine this problem with science educators (e.g., Moje, Collazo, Carrillo, & Marx, 2001; Schneider, Krajcik, & Blumenfeld, 2005), little is known about how Social Studies teachers take up PBL pedagogical strategies, which is our focus in this paper. Unless teachers are provided with support to enact such curricula they may, according to Barron and Darling-Hammond (2008), "be unable to use inquiry approaches to learning to their best advantage, engaging students in 'doing' but not necessarily in disciplined learning that has a high degree of transfer" (p. 55). In light of the long-documented challenges of reform efforts and the complexities of PBL, we believe studying the processes by which researchers and teachers work to iteratively revise and enact curriculum and instructional practices, may help address some of the difficulties teachers face (Walker & Leary, 2009).

Thinking back to the vignette above of teachers struggling to make sense of curriculum materials as they embarked upon a complex undertaking, we argue in this paper that a long-term reciprocal relationship between practice and PD can provide both a lens to study teacher learning and a means to further develop theory as it relates to teacher learning.

1.3. Research questions

This paper reports findings from a longitudinal study focused on the experiences of one teacher, Mr. Peterson.[3] The analysis of Mr. Peterson's four years with a larger research project illuminates how iterations of a project-based learning (PBL) approach to an Advanced Placement (AP) U.S. Government and Politics course (hereafter referred to as PBL-APGOV) and corresponding PD supported pedagogical shifts to better engage students in powerful learning. Our ultimate aim is to examine the processes and dynamic relationships that may influence teacher growth. To that end, we ask:

1. How does a teacher iteratively interact with a PBL curriculum, corresponding PD, and the research team?
2. How, if at all, do these interactions contribute to changes in his teaching practices and beliefs over time?

2. Method

2.1. The curricular context (AP) and the reform (PBL)

This paper is situated within a broader study, the Knowledge in Action (KIA) Project (Parker et al., 2013), which aims to foster deep, transferable content learning (Bransford, Brown, & Cocking, 1999; Darling-Hammond & Bransford, 2005). Although AP courses are considered the gold standard of rigorous curriculum, there is concern that AP does not account for current learning research (National Research Council, 2002). Pressured to serve more students, AP programs often focus on "coverage" of tested content, while deep conceptual learning and student engagement fall aside.

AP has a reputation of covering and testing too many topics. Rather than viewing breadth and depth in opposition, we aimed to coordinate both through a project-based learning (PBL) model (Barron & Darling-Hammond, 2008) in which the core concepts designated by the College Board were embedded within projects, giving students a "need to know" the material. Our instantiation of PBL aligns with Walker and Leary's (2009) core characteristics described above, with two additional principles: Rigorous projects drive the learning, rather than serving as "dessert" at the end of a unit (Larmer & Mergendoller, 2011); second, our courses embody an "engagement first" design that engages students immediately in projects (see Parker and Lo (2016) for more detail). The AP GOV course consists of five projects: Founder's Intent, Election, Supreme Court, Congress, and Government in Action. In each project cycle, students are put into a role (e.g. Delegate to the Constitutional

[2] Although Walker and Leary (2009) title their meta-review with the term *problem* based learning, they argue there are significant similarities between problem-based learning, project-based learning, and inquiry-based learning; we use the terms interchangeably in this paper.

[3] All names in the study are pseudonyms.