



Full Length Article

Making transparent the challenges of developing a practice-based pedagogy of teacher education

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H I G H L I G H T S

- Enacting practice-based teacher education requires a change in pedagogy.
- More transparency is needed in the identification of core practices.
- Teacher educators' conceptual and practical knowledge inform one another.

A R T I C L E I N F O

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Much of the recent scholarship in teacher education relays the importance of preparing teachers to enact practice. However, scholars working in the fields of self-study and core practices have questioned the capacity of teacher educators to engage novice teachers in meaningful practice-based work. We use collaborative self-study to examine the first author's experiences of using core practices as a guiding framework with novice teachers of English language learners. Findings illuminate a developmental journey that many teacher educators will experience as they undertake this work to make both conceptual and practical shifts in their pedagogy of teacher education.

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1. Introduction

Situated within an international dialogue that has called for more clinical experience in the preparation of novice teachers (e.g., Darling-Hammond, 2006; Davies et al., 2015; NCATE, 2010; 2013; Zeichner, 2010), recent scholarship in teacher education asserts the importance of providing novice teachers with “experiences of teaching,” (Berry & Loughran, 2002, p. 15). This focus on practice is in contrast to previous approaches that have armed teachers with specialized theoretical knowledge *about* teaching and learning but have not done as much to prepare them to *enact* practice (e.g., Ball & Forzani, 2009; Kessels & Korthagen, 2001). Scholarship about the importance of sustained opportunities for practice in novice

teacher preparation has arisen as a way to provide more meaningful preparation to new teachers (e.g., Ball & Forzani, 2009; Darling-Hammond, Hammerness, Grossman, Rust, & Shulman, 2005; Grossman, Hammerness, & McDonald, 2009), in ways that more explicitly link university and field experiences (Darling-Hammond, 2006, 2012). This shift to more extended and embedded opportunities to engage in practice has emerged in contradistinction to traditional teacher education program designs that engage novices in “taking batches of front-loaded coursework in isolation from practice and then adding a short dollop of student teaching to the end of the program” (Darling-Hammond, 2006, p. 307). These traditional approaches have been criticized by many for not preparing novices to do the complex work of teaching (e.g., Berry, 2007; Forzani, 2014; Grossman & McDonald, 2008; McDonald, Kazemi, & Kavanagh, 2013; Russell, 1997), thus leaving novices to figure out how to teach on the job. While these criticisms might be partially addressed through more exposure of novices to

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the work of classrooms,¹ recently scholars have argued that time spent in and around classrooms is not sufficient (e.g., [Feiman-Nemser, 2012](#); [Forzani, 2014](#)). Instead, they argue, it is more critical for novice teachers to be engaged in systematic opportunities to examine and enact practice. However, enacting a practice-based focus in the pedagogy of teacher education means that teacher education programs and teacher educators must make massive epistemological and practical shifts. Despite a growing body of literature that focuses on the work of teacher educators, we know little about how they experience the growing demands to make practice more central to the work of teacher education (for exceptions see [Berry & Loughran, 2002](#); [Loughran & Berry, 2005](#)). It is within teacher educators' work of engaging in a sustained focus on practice and developing new epistemological and practical ways of being that this study is situated.

Our aim in this collaborative self-study is to examine how the first author (FA), working with the second author (SA) as a critical friend, began to use the scholarship in core practices (e.g., [Ball & Forzani, 2009](#); [Grossman et al., 2009](#); [Lampert et al., 2013](#); [McDonald et al., 2013](#)) as a foundation for developing a practice-based pedagogy of teacher education for novice teachers of English language learners (ELLs).² Given the burgeoning ELL population worldwide (e.g., [British Council, 2013](#); [Graddol, 2006](#); [NCELA, 2015](#)), the lack of preparation of teachers to engage these students in ways that build upon their existing content and linguistic resources ([Bunch, 2013](#); [Kibler, Walqui, & Bunch, 2015](#)), and the need to more clearly identify a knowledge base for language teacher education (e.g., [Crandall, 2000](#); [Freeman & Johnson, 1998](#)) in an era of globalization and shifting demands ([Kibler, Valdés, & Walqui, 2014](#); [Kubanyiova & Crookes, 2016](#); [Valdés, Kibler, & Walqui, 2014](#)), a focus on the practice-based preparation of novice teachers of ELLs is an area in which there is great need but thus far limited investigation ([Dubetz & Coffey, 2015](#); [Dubetz & Collett, 2016](#); [Grossman & McDonald, 2008](#); [Peercy, 2014, 2015](#); [Thompson et al., 2016](#); [Troyan & Peercy, in press](#)). Furthermore, though the scholarship in core practices has recognized that doing practice-based work will require new pedagogies of teacher education (e.g., [McDonald et al., 2013](#)), there is limited research that explores the learning and development required of teacher educators engaged in these new pedagogical directions (see [Kazemi Ghouseini, Cunard, & Turrou, 2016](#); [Peercy, 2014](#)).

In this study, we respond to calls to better understand the work of teacher educators ([Conklin, 2015](#); [Kazemi, Ghouseini, Cunard, & Turrou, 2016](#); [Knight et al., 2014](#)), and in particular, their work in practice-based pedagogies. We do so by illuminating what the FA experienced in her attempts to design a practice-based pedagogy for teaching ELLs (a discipline that is only beginning to specify core practices for teaching), using scholarship in core practices as her guiding framework. We believe that examining the experiences of a teacher educator who was beginning to use a practice-based approach within a nascent area of core practices scholarship provides especially salient insights about teacher educators' learning trajectories as they attempt to refocus teacher education in more practice-based ways. Our investigation of the FA's epistemological and practical shifts when seeking to make practice the center of her

work is important for understanding the behind-the-scenes work for teacher educators (TEs) as they aim to bridge the so-called "theory-practice gap" (e.g., [Anderson & Herr, 1999](#); [Korthagen, 2010](#); [Wubbels, Korthagen, & Brekelmans, 1997](#)) by using practice-based pedagogy as the foundation for their work. As we describe below, in a core practices approach, an understanding of the theory that undergirds practice is developed through engaging in practice. This dialectic, or "reciprocal, recursive, and symbiotic [relationship] of scholarship and practice" ([Cochran-Smith, 2005](#), p. 219; see also; [Cochran-Smith & Lytle, 2009, 2004](#); [Orland-Barak & Yinon, 2007](#)) occurs when practitioners hold "theorizing and doing" ([Cochran-Smith, 2005](#), p. 219) in tension with one another, allowing one to inform the other. We argue that this dialectic is enabled through a core practices framework when novice teachers and the teacher educator reflect on practice through a cycle of examining instances of particular kinds of practice, jointly deconstructing them, then attempting the same kinds of instructional moves. However, engaging novices with practice in these ways is deeply demanding work for teacher educators, and the processes and learning involved in doing so are not yet well-understood. Although we agree with [Cochran-Smith and Lytle \(2004\)](#) that "when university-based faculty intentionally work the dialectic of research and practice, it makes possible a genre of scholarship in which rich new ways to 'theorize practice' and, at the same time 'practicize theory' are developed" (p. 636), the complex nature of this work in developing core practices has yet to be illuminated.

We explore the following research question, using collaborative self-study methodology to examine the experiences of the FA as a "telling case" ([Mitchell, 1984](#)): What challenges were part of the FA's experience of developing a practice-based pedagogy of teacher education for teaching ELLs? We argue that our findings provide insight regarding the development of teacher educators (TEs) as they participate in and contribute to the evolving field of practice-based pedagogies of teacher education.

2. Background literature: practice-based approaches

The field's current turn to a focus on practice is not historically unique ([Forzani, 2014](#); [Zeichner, 2012](#)). However, some scholars argue that the current shift to practice-based teacher education represents a change because it relies less on practice as the length of time spent "in the field" and more on "acquiring skill at... particular, well-specified practices" ([Forzani, 2014](#), p. 358). This call to a deeper focus on practice in teacher education is evident in at least two current areas of inquiry in teacher education: the research on core practices for teaching, and the scholarship in self-study of teacher education practices (S-STEP).

2.1. Core practices

One area of teacher education research that has emphasized deeper attention to practice is the recent and growing body of work in core practices (also identified in the literature as high leverage or ambitious teaching practices). Researchers working in core practices, drawing on what [Kennedy \(1999\)](#) has called the "problem of enactment" (p. 70), have argued that novice teachers must have regular, systematic opportunities to practice essential aspects of teaching, so that they may gain the necessary repertoire to teach students in ways that support their learning. Although many questions remain about how to define, identify, and teach novice teachers how to enact core practices, they have been defined in the literature as those practices that are essential to successful classroom teaching and student learning, and are possible for novices to learn and enact in their teaching ([Grossman et al., 2009](#); [McDonald et al., 2013](#)). Cross-cutting core practices, or practices that

¹ Many such shifts have occurred through greater exposure to clinical practice, such as site-based teacher education programs, teacher residency programs, and other partnerships between school districts and university teacher education programs (e.g., [Forzani, 2014](#)) to increase novices' exposure to field-based interactions.

² We use the term ELLs because it is commonly used in US contexts to identify students who speak a language(s) other than English and are learning both English and grade-level content while in school. Many other descriptors are used in US and international contexts, and include EAL (English as additional language), LOTE (languages other than English), and EB (emergent bilinguals).

exemplify quality teaching in any grade or subject (such as leading a whole class discussion or communicating with parents), have been identified by some scholars working in this area (e.g., Core Practice Consortium, 2013, 2016a, 2016b; Forzani & Ball, in review; TeachingWorks, 2016). Additionally, content-specific core practices, such as eliciting and responding to students' mathematical ideas, (Lampert et al., 2013), employing historical evidence in teaching history (Fogo, 2014), providing comprehensible input in the target language in world languages and ESOL (English for speakers of other languages) instruction (Troyan, Davin, & Donato, 2013; Troyan & Peercy, in press), and pressing students for evidence-based explanations in science (Windschitl, Thompson, Braaten, & Stroupe, 2012) have also begun to emerge as teacher education scholars identify core practices within the disciplines. These practices are often situated within instructional activities (IAs) that provide a vehicle, or "container," (McDonald et al., 2013, p. 382) for novice teachers to examine and enact the targeted practice. The IAs, such as choral counting in math (Kazemi et al., 2016; Lampert et al., 2013) and telling a story in world languages (Peercy, 2014; Troyan et al., 2013), are intended to provide sufficient structure for novice teachers to arrange the classroom, use materials, and interact with students (McDonald et al., 2013), so they can work within that structure to successfully engage in the targeted practice.

In conjunction with specifying core practices and IAs for teaching, researchers working in this area have developed a cycle to support novice teachers as they learn to practice (Lampert et al., 2013; McDonald et al., 2013; Troyan et al., 2013). This scaffolding of practice, referred to as the core practice cycle (e.g., Lampert et al., 2013), engages novice teachers in systematic deconstruction and rehearsal of a core practice through a particular IA. This is followed by implementation of the practice with students, usually in a K-12 setting (see Fig. 1). Afterward, novice teachers share the videotaped implementation for discussion in the teacher education setting, and collectively analyze their implementation of the focal practice(s) with the students. Novice teachers often write a reflection about their practice as a culmination of the experience. These opportunities to engage in practice in concrete ways are intended to support novice teachers in knowing how to *do* some of the most essential work of teaching prior to entering their first year of teaching.

In contrast to the work on pedagogical approaches in S-STEP, described below, the scholarship on core practices has gained a broad audience of teacher educators across a number of disciplines, and is poised to be a possible focal point in practice-based approaches to move the collective practice of teacher education forward (McDonald et al., 2013). However, the scholarship on core practices is currently limited by an underdeveloped pedagogy of teacher education. While much work has been done to identify the disciplinary and cross-cutting core practices in which novices gain experience, and to develop a learning cycle to scaffold this engagement with practice, little is known about the work going on "behind the curtain." That is, how do TEs engage in this kind of work with novice teachers (for a recent example see Kazemi et al., 2016)? To be sure, we know little about TEs' "development of professional knowledge of teaching about teaching" (Berry, 2007, p. 1). This is

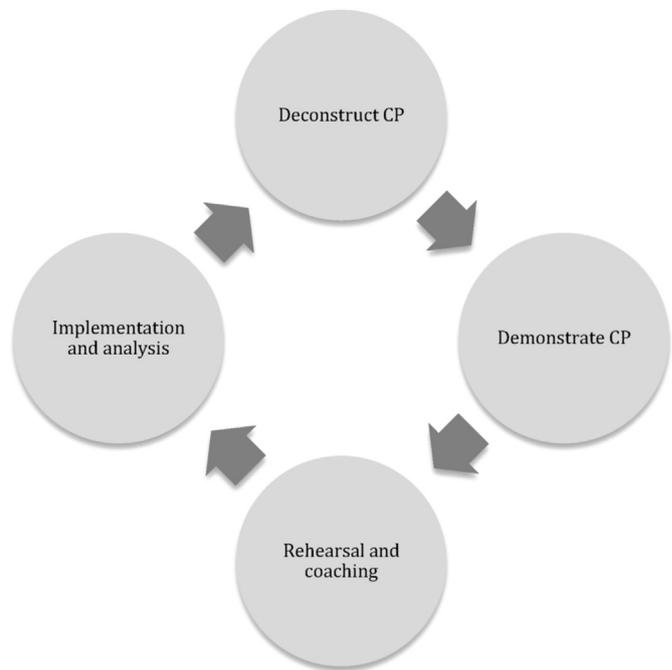


Fig. 1. Core practice cycle.³

certainly true of the work in core practices. Few have explored what it means for TEs to take up these new ways of approaching teacher education or the challenges and opportunities TEs experience as they attempt to engage in practice-based work (for exceptions, see Peercy, 2014, 2015). Until TEs working in core practices clearly illuminate the ways in which they go about using a core practices approach in teacher education, this work will remain a black box. It is this gap in the literature on core practices that this study aims to address, through our use of collaborative self-study to explore the FA's reframing of her work as a TE.

2.2. Self-study

In self-study, the focus of investigation is the teacher educator's practice, so that the teacher educator might explore how to "[make] the tacit nature of practice explicit" to inexperienced novice teachers (Loughran, 2014, p. 5). A commonly held understanding among many self-study scholars is that novice teachers must have practical experiences with teaching to truly apprehend and absorb theoretical abstractions about teaching and learning (e.g., Berry & Loughran, 2002; Bullock, 2016; Korthagen, Kessels, Koster, Lagerwerf, & Wubbels, 2001; Korthagen, Loughran, & Russell, 2006; Loughran & Berry, 2005; Loughran, 2006; Russell, 2009). Specifically, an important framing of TEs' work in self-study research has been that of developing a pedagogy of teacher education to support TEs in "embed [ding novice teachers] in the experience of learning to teach" (Korthagen, Loughran & Russell, 2006, p. 1030). Through their use of the Platonic and Aristotelian concepts of *episteme* and *phronesis*, Korthagen and colleagues have created a foundation for how TEs can understand novice teachers' meaningful engagement with practice (Kessels & Korthagen, 1996, 2001; Korthagen & Kessels, 1999; Korthagen et al., 2006). *Episteme* is scientific, fixed, expert, and abstract knowledge, whereas *phronesis* is knowing through experience about "concrete particulars" (Kessels & Korthagen, 2001, p. 25). Korthagen and colleagues have asserted that much of traditional teacher education focuses on conceptual knowledge (*episteme*), which creates a gap between

³ The core practice cycle includes the following phases: examining practice and taking it apart into smaller components ("deconstruction"), viewing examples of practice ("demonstration"), engaging in practice teaching episodes during which the novice teacher is coached as she moves through moment-to-moment pedagogical maneuvers ("rehearsal"), and implementation of the lesson in the field setting with students ("implementation"), as well as reflection throughout the cycle (see also Lampert et al., 2013; McDonald et al., 2013; Troyan, Davin, & Donato, 2013).

novice teachers' understanding of concepts and their experiences (Kessels & Korthagen, 1996). They argue that *episteme* is too abstract for novice teachers to apply to their classroom settings. Instead, they argue, working from novice teachers' perceptual knowledge (*phronesis*) that novice teachers have generated through their experiences, TEs can help novice teachers to

become aware of the salient features of [their] experience. . . . not to provide the student [teacher] with a set of general rules. . . . [but] to find the rightness of tone and sureness of touch that only holds good for the particular situation (Kessels & Korthagen, 2001, p. 28).

From this perspective, then, learning to teach is grounded in experiences of practice. This practice-to-theory approach can take a variety of forms, such as an “experience first” model in which novices iteratively move from early field experiences to university coursework, and then recursively back to the field to apply both practical and theoretical knowledge (e.g., Russell, 1998, 1999). Others working in self-study have argued that supporting novice teachers' pedagogical growth through practice involves focused efforts using “explicit modeling” in university teacher education classrooms. Explicit modeling involves the teacher educator demonstrating pedagogical moves and working with novice teachers (and sometimes a co-teaching colleague) to explicitly unpack the maneuvers and reasoning behind them (Berry & Loughran, 2002; Loughran & Berry, 2005; Loughran, 2006; Swennen, Lunenberg, & Korthagen, 2008). Another practice-based approach that has been discussed in the self-study literature is “realistic teacher education” (e.g., Korthagen, 2011; Korthagen et al., 2006; Korthagen et al., 2001), in which novice teachers have more exposure to practice through an orientation followed by two teaching practice periods, interspersed with coursework and workshops at the university. These practice-based approaches have been encouraged in place of more traditional models of teacher education, which have followed a theory-to-practice approach, in which extended amounts of coursework generally precede field experience. The assumption of theory-to-practice models is that novices can be told how to teach and then go out and replicate what was discussed in relatively abstract terms at the university (Loughran & Berry, 2005; Loughran & Russell, 2007; Russell, 1999).

However, a key limitation of the practice-based self-study scholarship is that questions of engaging novices in practice through the various practice-to-theory means articulated by self-study scholars has not been taken up among the larger teacher education community in a systematic or sustained way. For instance, while the work on explicit modeling as an approach to helping teacher candidates “see into practice” (Loughran & Berry, 2005, p. 200) through techniques such as debriefing and journaling (see Berry & Loughran, 2002; Loughran & Berry, 2005; Loughran, 1996) has gained some traction among S-STEP scholars (e.g., Berry & Loughran, 2002; Berry, 2007; Loughran & Berry, 2005; Loughran, 1996, 2006; Lunenberg, Korthagen, & Swennen, 2007; White, 2011), it has not been broadly adopted within teacher education scholarship as a systematic and sustained line of inquiry (Lunenberg et al., 2007). Similarly, work on realistic teacher education has made some inroads among European scholars, but has not rallied large numbers of teacher educators and teacher education programs around a common purpose (e.g., Haugalokken & Ramberg, 2007; Korthagen, 2011; Korthagen et al., 2001; van Tartwijk, Veldman, & Verloop, 2011).⁴ Despite this limitation, the

work in self-study provides a solid conceptual framework for understanding the development of novice teacher and teacher educator knowledge. Because of the affordances self-study provides for examining educator development and practice, we used it to methodologically ground our examination of the FA's developing practice-based approach.

3. Methodology

3.1. A collaborative self-study approach

Building upon the understanding of *episteme* and *phronesis* as put forth by Korthagen and colleagues, and the challenges they identify for teacher educators who “have themselves been steeped in the *episteme* conception of knowledge” (Kessels & Korthagen, 2001, p. 30), self-study scholars have argued that there is much room for TEs to learn how to engage novice teachers in practice-based teacher education. As Loughran and Berry (2005) argue, “teacher educators face the same difficulty [as novice teachers do] in their learning of teaching about teaching . . . in many situations, teacher educators also need to develop their understanding through *phronesis* rather than through epistemic categorization” (p. 199).

Thus, the paradox is that TEs are generally ill-equipped to deeply involve novice teachers in the systematic examination of practice (Berry, 2007; Forzani, 2014; Peercy, 2014). This means that important learning must be undertaken by TEs themselves as they grapple with how to best engage novice teachers in the work of practice. For this reason, collaborative learning with colleagues with the aim of rethinking and reframing practice takes on significant importance for the continued development of TEs (Bodone, Gudjonsdottir, & Dalmau, 2004; Davey & Ham, 2009; Fletcher & Bullock, 2015; Hamilton & Pinnegar, 2013).

To examine our learning, we draw on sociocultural theories of learning (e.g., Lave & Wenger, 1991; Rogoff, 1994; Vygotsky, 1978; Wenger, 1998; Wertsch, 1991) to explore the socially mediated nature of our work in this collaborative self-study. From a sociocultural perspective, learning occurs first in a collective setting through negotiation of meaning with other people, texts, and mediating artifacts (or tools); then learning is internalized by the individual learner through the externalization of thought in dialogue (e.g., Johnson & Golombek, 2003; Johnson, 2006). Samaras and colleagues note how sociocultural framings support collective engagement for self-study:

According to Vygotsky (1978, 1981, 1986), others can extend and transform individual understanding with the very nature of language raising new thought, which, in turn, also influences and transforms the community itself. Self-study research itself builds on the necessity of a relationship between individual and collective cognition, and requires critical collaborative inquiry where personal insights are documented, shared, and critiqued for validation (Samaras, Gudjonsdottir, McMurrer, & Dalmau, 2012, p. 305; see also; Samaras & Freese, 2006).

Indeed, scholars who engage in collaborative self-study have acknowledged the vital role of dialogue with colleagues and critical friends to more deeply examine and transform their practices (e.g., Auld, Ridgway, & Williams, 2013; Bullock & Christou, 2009; Bullock & Ritter, 2011; Pinnegar & Hamilton, 2009). As Schuck and Russell (2005) articulate: “A critical friend acts as a sounding board, asks challenging questions, supports reframing of events, and joins in the professional learning experience” (p. 107). Work in self-study is, therefore, firmly grounded in conceptual frameworks emphasizing reflection and the situated nature of one's practice (e.g., Clift, Brady, Mora, Choi, & Stegemoller, 2005; Samaras & Freese, 2009).

⁴ For a recent example of this approach used in a US teacher education program, see Wasburn-Moses, Noltemeyer, and Schmitz (2015).

3.2. Purpose of the study

Our purpose in this collaborative self-study is to illuminate both the demands and the growth opportunities that are part of TE uptake of practice-based approaches to teacher education. We focus on the FA's attempts to use core practices as a foundation for an elementary literacy methods course for teachers of English language learners (ELLs). The data gathered were particularly rich for examining TE development in practice-based approaches as an emerging pedagogy, because, as previously mentioned, core practices for the teaching of ELLs have not been clearly identified. Thus the demands for defining and enacting a practice-based pedagogy of teacher education for teaching ELLs took on particular salience in this study.

3.3. Researcher positionality

The authors share an interest in better understanding how to use practice-based approaches in educating novice teachers to teach language learners. At the time data collection began, the FA had nearly a decade of experience as a TE preparing teachers of ELLs. However, a deeper focus on a practice-based approach to teacher education, and the use of core practices as an organizing framework in particular, were new to her. The SA had three years of experience as a TE, and was among a small number of scholars who had been using core practices as an organizing framework for preparing teachers of world language learners. We used self-study as both a research method and a vehicle for professional development (Gallagher, Griffin, Parker, Kitchen, & Figg, 2011) to investigate the FA's early experiences of learning to engage teachers of language learners in ways that make practice central to their learning to teach.

When we first met at a conference in 2013, the FA was in the process of redesigning an ESOL elementary literacy methods course that she had taught several times before. She was changing the framework of the course to include a deeper focus on *doing* practice, rather than *talking about* practice, guided by work in core practices (Ball & Forzani, 2009). The FA was therefore engaged in the challenging work of both identifying core practices for teaching ELLs, and supporting novice teachers in enacting those core practices in their emergent pedagogy. To accomplish this, the FA regularly conversed with the SA about developing a practice-based pedagogy of teacher education and, specifically, about how to engage novice teachers of language learners in using core practices as foundational to their learning to teach.

3.4. Data collection

Because of the geographic distance between our universities, we relied heavily on electronic means for regular interaction and discussion.⁵ To closely examine how the FA grappled with the identification of core practices and enactment of practice-based pedagogy, we drew upon the following data sources from the 2013–14 academic year: our email correspondence; transcripts from our meetings; and Google Docs with shared meeting agendas, notes, and reflective journal entries about our ongoing work and learning. Journal entries were created using a collaborative online document (in Google Docs) shared by the authors. We wrote reflective journal entries at any time, but did so on a regular basis after meetings and particularly interesting email exchanges. Meeting agendas were

created in advance of each meeting and were collaboratively generated based upon revisiting previous emails, running meeting notes, reflective journaling, and transcripts of earlier meetings. Meeting content also included new topics and many spontaneous interactions not reflected in the agenda. Most meetings were held via videoconference (with two in-person meetings during the data collection period). All meetings were video recorded. Data sources also included course syllabi and assignments from practice-based methods courses taught by both authors.

Additional supporting data came from the FA's elementary ESOL literacy methods course taught in Fall 2013. The course, taught at a large public research university in a busy metropolitan area in the eastern US, enrolled 24 novice teachers from three different M.Ed. programs, two that led to K-12 certification in ESOL, and one that was a non-certification M.Ed. Data sources from the course included a video recording of one class meeting attended by both authors in which three novice teachers engaged in their first rehearsal cycle, an end-of-semester reflection paper and course survey from all novice teachers, and transcripts from interviews with three novice teachers (for a timeline and summary of data sources, see Table 1 below).

3.5. Data analysis

We engaged in interpretive qualitative analysis (e.g., Cochran-Smith & Lytle, 2004; Creswell, 2009) to iteratively examine the data in this study. Using the constant comparative method (Corbin & Strauss, 2014), we began by working independently to explore the data from the first year of our collaboration, including our emails, course materials, video recorded meetings, meeting notes and agendas, and reflective journaling, to identify initial themes. Our early memoing and coding of the TE portion of the data set noted the FA's uncertainty and questions as she attempted to reframe her practice. With these themes in mind, we more closely analyzed the TE data by coding email texts from June 2013–August 2014. We selected and coded 30 email conversations that focused heavily on questions and dilemmas of practice from among approximately 450 emails exchanged the data collection period. In addition to the themes (uncertainty, reframing) from our initial coding of the TE portion of the data set, the examination of email data revealed the importance of dialogue with one another about practice-based pedagogy in this emergent area of core practices (dialogic interaction). Next we began to look more carefully at all meeting-related data: video recordings from our meetings (13 in total during the data collection period), and related meeting agendas and meeting notes. We selected six meetings (representing 427 min of video) for transcription because these meetings focused especially on issues related to developing a practice-based approach to teacher education. We also carefully examined reflective journal entries during this phase of analysis. These data also were coded using the codes generated from other data (uncertainty, reframing, dialogic interaction), and five additional codes were added to our coding scheme: scaffolding, comprehensible input, struggle, enactment, and theory. After careful examination of the TE data, we explored data from the novice teachers' reflection papers, surveys, and interviews, as well as course materials, identifying codes such as novices' confusion and need for concreteness. As we analyzed the data, a key theme became apparent in the FA's attempts at a practice-based focus with novice teachers: the challenge of specifying critical elements of practice, which we came to recognize as the FA's grappling with the gap between phronesis and episteme in her nascent practice-based pedagogy of teacher education.

⁵ See also Bullock and Ritter (2011), Fletcher and Bullock (2015), and Ragoonaden and Bullock (2014) for similar electronic data sources used in collaborative self-studies.

Table 1
Project timeline and related data sources.

Date	Activity	Related data sources
June–August 2013	FA identifies CPs for course. FA redesigns course. FA and SA engage in regular meetings and email correspondence.	Email correspondence Course syllabus and assignments Meeting transcripts Meeting agendas Meeting notes
August–December 2013	FA teaches course with new focus on CPs. FA and SA engage in regular meetings and email correspondence. FA solicits NT feedback.	Course syllabus and assignments NT rehearsal Meeting transcripts Meeting agendas Meeting notes Email correspondence NT reflection paper NT survey NT interviews
January–July 2014	FA and SA engage in regular meetings and email correspondence. FA and SA regularly engage in reflective journaling. FA iteratively redesigns CPs and course based on experience and NT feedback.	Meeting transcripts Meeting agendas Meeting notes Email correspondence Reflective journal entries Course syllabus and assignments
August 2014	FA and SA meet face-to-face to discuss and further redesign course.	Meeting transcripts Meeting agendas Meeting notes Reflective journal entries Course syllabus and assignments

4. Findings

Because the field has yet to clearly illuminate the pedagogical deliberations of teacher educators using core practices as a framework to do practice-based work, and teacher educators are in the early stages of identifying core practices for teaching ELLs (for examples see [Dubetz & Coffey, 2015](#); [Dubetz & Collett, 2016](#); [Peercy, 2014](#); [Peercy, Kidwell, DeStefano, Tigert, & Fredricks, 2016](#)), the FA was working in particularly demanding terrain. She was attempting both to identify core practices for teaching ELLs and to develop her pedagogy for using core practices as a framework for her course. To gain some sense of equilibrium, and to gain further insight about how to engage with this new way of approaching her work with novice teachers, the FA regularly conversed with the SA about her practice. Emails and meeting transcripts revealed intensive conversation during the summer of 2013 about how to create a new pedagogical framework as the FA redesigned her ESOL literacy methods course for fall 2013, focused around core practices. These discussions formed the basis of our interactions about engaging novice teachers in practice-based work. Below, we focus on the interplay of our conceptual and practical knowledge as we worked together to develop a new understanding of TE pedagogy informed by the core practice conceptual framework.

Our data showed evidence that the FA struggled with how to identify core practices for teaching language learners and how to engage novice teachers in the core practice cycle (see [Fig. 1](#)). She consulted the SA frequently as she worked to reframe her practice. Initially, these conversations were steeped in episteme as the FA searched for new theoretical grounding. For instance, in an email exchange, the FA asked the SA the following question about identifying which core practices to focus on in her methods course:

How did you identify [the three core practices you focus on in your methods course?] I'm wondering about your process. Did you do a literature review? Did you talk with other experts in the field or in your program, generate a longer list, and then come to consensus? I am trying to decide how it is that I can

support an argument for the kinds of practices I decide to... focus on in this course ... since there's almost no literature about ELLs and [core practices] (email, 07-23-13).

A few days later, she queried the SA about the four practices she was considering for her course:

Do the following four seem like appropriate ELL core practices to you?

- a comprehensible input⁶
 - b generating content and language objectives
 - c scaffolding⁷ language learners in ways that are responsive to their language proficiency, cognitive abilities, and the demands of the task
 - d opportunities for both receptive and productive use of language
- ... I am also wondering if four [core practices] is too many (email, 07-25-13).

⁶ Comprehensible input, a concept first identified in Krashen's work in second language acquisition in the 1970s and 1980s (e.g., [Krashen, 1982](#)), is based on the claim that we acquire more language when exposed to "comprehensible input," or language input that is "a little beyond" (p. 21) our current level of competence, but which is comprehensible through our use of context, our knowledge of the world, and other extralinguistic cues. We use comprehensible input to mean teachers' attempts to support comprehension in another language through means such as acting out information, providing visual support, and using gestures.

⁷ Scaffolding is a concept developed by Bruner and colleagues in the 1970s ([Bruner, 1978](#); [Wood, Bruner, & Ross, 1976](#)) based upon work in constructivist theory by Vygotsky (e.g., 1962). Scaffolding is the support and assistance that learners need to perform at a higher level than they can independently. As [Bruner \(1978\)](#) states, "[Scaffolding] refers to the steps taken to reduce the degrees of freedom in carrying out some task so that the child can concentrate on the difficult skill she is in the process of acquiring" (p. 19). Once learners can achieve at the higher level without support, scaffolding can be phased out. We use scaffolding to mean any number of supports that can be provided by teachers, peers, texts, and/or tools. Scaffolding can include instructional routines, direct instruction that is gradually faded out to independent learning, sentence frames for writing, note-taking outlines, previewing text, and many other types of temporary learning assistance.

To be sure, the urgency of identifying the core practices that would form the basis of the FA's practice-based approach dominated our early dialogue as she sought to specify which practices are essential to the work of teachers of ELLs. The FA did not yet have practical experience with using a practice-based framework that she could use as a bridge to her abstract conceptual knowledge of core practices gained through reading the literature. Thus the SA's role as a critical friend who had experience using core practices as a foundation for his methods course was central to supporting the FA's complex decision-making as she deepened her focus on practice in teacher education.

Once the semester began, the FA put her newly developed framework into action and began to make more sense of her growing conceptual knowledge about core practices through her experience. This "knowing through experience" (Kessels & Korthagen, 2001, p. 25; see also; Loughran & Berry, 2005), in turn, re-shaped her conceptual knowledge. For instance, after engaging in the first of two core practices cycles for the semester, she began to question whether some of the practices she had identified for the course were appropriate for use as core practices. She discussed this shift in her thinking in an email to the SA:

I had a revelation the other day: I don't think using content and language objectives are actually core practices ... I think instead they are probably tools that get you to a core practice, which is something more like teaching a clearly articulated lesson (or something like this), but it occurred to me that I think some of the surface behaviors we want to see from preservice teachers (like including content and language objectives in lessons) are not actually core practices (email 10-17-13).

The FA and SA discussed the emerging understanding of core practices for teaching language learners (their own and the field's) further in a videoconference meeting a few days after the FA's email:

FA: [After doing an assignment in which they watched a teacher enact part of a language lesson on video,] several of [the novice teachers in my class] commented that [a problematic aspect of the lesson was that the teacher in the video] hadn't explicitly stated her content and language objectives at the beginning of the lesson.

SA: Yup, yup.

FA: But that's not so much the core practice, is it? I mean, the core practice is more that you have the objectives in mind as you are creating and enacting the lesson ... When you don't have clear objectives, then, you know, other things start to kind of fall apart in the lesson, but does that mean the objectives themselves are a core practice? Or does that mean that they lead to certain core practices - you know what I mean?...

Those [objectives] are more like *tools* to getting to something else. So, I don't know if those are the core practices themselves, does what I'm asking make sense?

SA: So, so I guess - yeah. Coming back to- is it a core practice? What is the core practice?

FA: Right, this all goes back to - I think this all goes back to the bigger question of what *are* core practices for teaching language learners? (10-21-13 meeting).

Questions about the fundamental aspects of developing a practice-based pedagogy centered around core practices was a

topic that we came back to repeatedly, pushed by our conversations, experiences in class, and questions from students. For instance, in a class meeting that the authors attended together via videoconference in which a triad of the FA's students engaged in their first rehearsal, an important question about two of the core practices the FA had chosen to focus on in the course arose from a novice teacher named Kendra.

Kendra: So one thing that I'm noticing as we focus on core practices in this class is that scaffolding- two of the core practices are scaffolding [*gestures to left*] and then another one is comprehensible input [*gestures to right*] and so I'm noticing that those two so often overlap, right?

FA: Mmmhmm.

Kendra: So in order to make something comprehensible [*gestures to right*] there has to be some kind of scaffolding [*gestures to left*], um, and in order to- you know- provide scaffolding, so often you have to make the input more comprehensible to make that accessible to students.] So, [*FA nods*] I'm interested in the ways in which I can make this input more comprehensible to students

FA: Mm-hmm.

Kendra: And, you know, in my mind that may... overlap with scaffolding (Kendra rehearsal, 10-21-13).

Although Kendra posed an important dilemma related to her phronesis, or practical knowledge, of two of the course's core practices, neither of the authors recognized it as such in the moment. Instead, we continued with Kendra's rehearsal without further considering her question about the "overlap" she perceived in scaffolding and comprehensible input. It was not until the end of the semester, when we had a chance to reflect upon the course, that we began to consider the importance of this query. This was sparked by noticing that other teachers made similar comments. For instance, Greg's observation in his final reflection paper was as follows: "It's not so much that I don't understand the practices of scaffolding and comprehensible input, I just don't understand why they are different practices" (final reflection paper, 12-09-13). Greg's comment, like Kendra's, seemed to indicate that he had conceptual knowledge of both practices, but did not see a difference in their practical enactment. Questions like Kendra's and Greg's led to further conversation between the authors about the FA's struggle to identify core practices for the course.

FA: As I worked with students... a few of them pointed out [that they were] having a hard time discerning between scaffolding and comprehensible input I guess my point is that *seeing more of this in practice* and then trying to break it down and identify, 'so what [core practice] was that there?' ... it may be that, really this [comprehensible input] is - like an outcome, an effect of this [scaffolding], or, you know, like, scaffolding leads to comprehensible input, perhaps? It's hard to say for sure [what the relationship between the two is] ... and at one point I thought maybe scaffolding was the bigger umbrella -

SA: Yeah because you have to be comprehensible to provide effective -

FA: scaffolding. Right, but you could do other things - I mean I guess it all should be comprehensible if it's going to be effective scaffolding. I don't know - obviously I'm flailing around here trying to figure it out (emphasis added, meeting 12-20-13).

Kendra and Greg's questions arose from their experiences of trying to identify instances of comprehensible input and of scaffolding *in practice*—as they enacted a lesson that targeted their use of these practices. Their experiences made clear that although scaffolding and comprehensible input are identified in the research literature as distinct, when enacted they have many pedagogical similarities. It was through the implementation of these constructs that it became evident that they had considerable overlap in how they unfolded in the classroom. The FA had a parallel experience: it was through the experience of engaging in her practice (with the teachers), and later reflecting on that practice, that the challenge of disentangling these concepts came to light. Until more deeply considering these two foundational ideas through the lens of practice and subsequently engaging in dialogue and reflection with the SA, it had not occurred to the FA how closely the two constructs aligned, and how difficult it would be for novice teachers to identify distinct instances of each construct when considering their practical implementation. The literature about each is distinct because of the particular contexts within which each theory was developed and articulated (psychology and second language acquisition, e.g., Bruner, 1978; Krashen, 1982). These differing historical trajectories have served to maintain a theoretical distinction between them as separate constructs, both in the literature and in the FA's epistemic understanding of them. Thus, while the episteme for each construct is distinct, the overlap between them is in their phronesis.

After the FA had taught the course once, and was revising it in preparation to teach it again, we revisited this issue. It is evident from the excerpt below that using a practice-based framework is a complex task that requires TEs to think in new ways about theoretical constructs they may have taught students about for many years:

FA: [Reminding SA:] A really interesting question I had from [novice teachers in my fall 2013 course]... was what's the difference between those [scaffolding and comprehensible input]?

SA: Well this, I guess [scaffolding] encompasses a wider range of tools

whereas [comprehensible input] is focused on the teacher's tools, the teacher's action. I'm trying to think -

FA: Scaffolding, to me, is like a whole series of decisions that the teacher makes about how much support and what kinds to provide scaffolding can mean something like, 'Oh I'm going to make sure that I talk about this concept before this concept because' - of course what I was going to say is because students can understand it better, which then comes to *comprehensible*, right?

SA: [Thinking aloud in the role of a teacher, proffering an example of scaffolding, and distinguishing scaffolding from comprehensible input by noting that scaffolding does not need to include language output] 'I'm going to use this particular graphic organizer which doesn't ... ' - it may not have any language on it at all.

FA: But I think that may be a narrow understanding of comprehensible input I mean, aren't gestures [which do not use language output] a part of comprehensible input?

SA: Yeah.

FA: Are visuals part of comprehensible input?

SA: Yup [rubs head, thinking]-

FA: I'm glad I'm not the only one having a hard time with this (08-13-14, face-to-face meeting).

Our ongoing dialogue regarding how to disentangle the practical enactment of these two constructs led the FA to reconsider her episteme (understanding of theoretical constructs). Although the FA found that she possessed the conceptual knowledge of many foundational tenets of teaching language learners, had talked *about* these concepts for years with novice teachers, and had used them herself when she had taught language learners, she realized that in her previous years of teaching novices, she had in many instances been telling them *about* teaching. This struggle to disentangle comprehensible input and scaffolding was a symptom of an underdeveloped phronesis, or pedagogy for identifying, explaining, and exemplifying the differences between the two concepts. Indeed, the challenge of distinguishing the differences between these two theories pointed to the need to carefully unpack how the underlying constructs chosen as core practices play out instructionally. For instance, engagement in our collaborative self-study around questions of scaffolding as a core practice challenged the FA to think more deliberately about the kinds of instructional moves that comprise scaffolding, ultimately encouraging her to frame her exploration of scaffolding with NTs around their experience of leading a read-aloud activity with ELLs, and helping NTs to consider the types of specific scaffolding activities that ELLs benefit from in each stage of a read-aloud (see Peercy et al., 2016).

It is illumination of this type of "living through" (Loughran & Berry, 2005, p. 198) these experiences that is thus far lacking in the scholarship in core practices, though Kazemi et al. (2016) have recently appeared to allude to the need for such work: "because the work of TEs is complex, the field needs research that attends to the complexity of their learning" (p. 29). Here we have attempted to begin that work by highlighting the early stages in the development of phronesis for one TE engaging with a core practices framework. As we discuss in greater detail below, if we are to advance in developing a practice-based pedagogy for teacher education, TEs, like novice teachers, must also systematically deconstruct our practice, reflect, and begin again. It is through making our work public and subject to the critique and feedback of colleagues that we will succeed, both individually and as a field.

5. Discussion

We found Loughran and Berry's (2005) assertion that "teacher educators need to experience ... the development of their perceptual knowledge through their own learning" (p. 198) to resonate strongly with our experiences as we examined how the FA attempted to make practice a more explicit focus of her pedagogy of teacher education. Through our struggle to differentiate two key theories that inform practices that are valued within our field—in this case, comprehensible input and scaffolding—it was clear that neither the FA's conceptual knowledge of them, nor her own previous experiences drawing upon these constructs when teaching language learners herself, were enough to guide her in helping novice teachers to discern how they were distinct when enacted *in practice*. Her own conceptual and practical knowledge of comprehensible input and scaffolding had not provided a foundation for how to relay their differences to others, and to grasp this she had to experience this herself. Indeed, as Loughran and Berry (2005) have noted, the only way to develop an understanding of how to engage novice teachers in practice is by learning from the experiences of engaging them in practice—by developing an "understanding [of teaching about teaching] through phronesis rather than episteme"

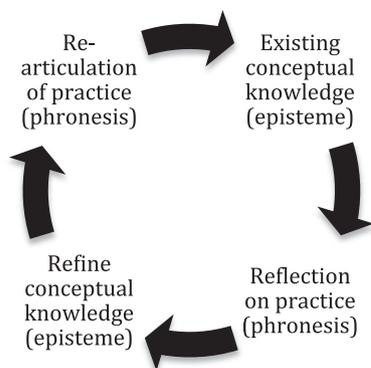


Fig. 2. Cyclical relationship for phronesis and episteme.

(p. 200). Thus, the experiences of the FA demonstrate a cyclical relationship between phronesis and episteme: reflection on her practice led to a refining of her conceptual knowledge, which then led to a subsequent re-articulation of her practice (see Fig. 2).

This cycle of TE development has yet to be deeply examined in the literature, which has tended to focus on the relationship between phronesis and episteme as a way to reframe teacher educators' approach to the development of novice teachers (for exceptions see Berry & Loughran, 2002; Loughran & Berry, 2005). Specifically, these theoretical constructs have been used to help teacher education scholars understand the limitations of episteme-based approaches to teacher education, and to describe the type of support that develops the practice of novice teachers (e.g., Kessels & Korthagen, 1996; Korthagen & Kessels, 1999; Korthagen et al., 2001). We suggest that the use of phronesis and episteme are likewise powerful perspectives for conceptualizing and investigating TE development and, thus, bear further examination as other scholars engage in practice-based work.

To date, the challenges embedded in making practice-based shifts as part of a changing pedagogy of teacher education have yet to be considered in detail by scholars using a core practices framework. Kazemi et al. (2016), building upon prior work in which they examined the roles TEs play during rehearsals, recently illustrated considerations that guided their decision-making processes during rehearsals. While this is an important initial step, questions about the pedagogical considerations of TEs as they engage in practice-based work merit more detailed exploration and conversation. One challenge that has not been discussed by those doing work in core practices is that of the decision-making involved in identifying the core practices upon which to focus with novice teachers. The process of identifying core practices for teaching ELLs generated much conversation between the two authors of this study. However, we found limited mention of how other disciplines with more developed literature on core practices have approached the process of identifying and refining core practices for use with novice teachers from which we could learn (see Fogo, 2014; Forzani & Ball, in review; TeachingWorks, 2016; Windschitl et al., 2012 for limited explanation). This is of particular importance as core practices become more prevalent in a variety of content areas and for teaching a wide diversity of learners. The considerations that scholars and educators should weigh while identifying "what counts" as core practices (McDonald et al., 2013; Windschitl et al., 2012), and what criteria are used to identify them, would be greatly supported by transparency about this process from other studies.

Furthermore, identifying meaningful core practices is only one aspect of the pedagogy of engaging novice teachers in practice-

based work. Future research must deeply explore questions of engaging novice teachers in the activity of actually *doing* the practices. Instructional activities (IAs) have been put forth as a key feature in making core practices more visible and concrete for novice teachers. As mentioned above, core practice scholars describe IAs as a container for the development of practice because they allow the TE to embed a particular core practice into an "instantiation of teaching-in-action," (McDonald et al., 2013, p. 382) rather than the core practice remaining an abstraction. Thus, IAs are intended to facilitate the embodiment of "the concrete particulars," or the phronesis, of teaching (Kessels & Korthagen, 2001, p. 25). However, though examples of IAs have been identified in other fields (such as launching and using word problems in mathematics, Lampert et al., 2013; and sourcing documents in social studies, McDonald et al., 2013), the literature is not transparent about how IAs are developed and enacted in relationship with core practices (e.g., Kazemi et al., 2016; Lampert et al., 2013). Although some researchers allude to the complexity of enacting TE pedagogy in this new way (e.g., Forzani, 2014; Kazemi et al., 2016; Lampert & Graziani, 2009), the core practice scholarship rarely illuminates the instructional details and dilemmas involved in this new kind of work. Specificity and transparency regarding the enactment of practice-based pedagogy across a number of disciplines would aid TEs in designing teacher education with core practices as an organizing framework.

Another dimension of this work that requires further attention and care is that of tying the practical knowledge (of both TEs and novice teachers) back to theoretical constructs—that is, not focusing so heavily on practice that the work becomes divorced from its theoretical moorings. As several Dutch scholars have argued, it is not enough to support novices in enacting the practices modeled in the teacher education setting through their own teaching, but rather, novices must also be able to connect practice—both the practices of their TE and their own practical experiences—to theory (e.g., Lunenberg et al., 2007; Swennen et al., 2008; Wubbels, Korthagen, & Brekelmans, 1997). We add that the same is true of TEs: they need to be able to move from their own practical experiences to additional theory-building about practice-based work (see also Cochran-Smith, 2005; Korthagen, Loughran, & Lunenberg, 2005), to feed the theory-practice dialectic. We must therefore take care with practice-based approaches to use practical experiences as a way to deepen theoretical understanding for both teachers and teacher educators.

However, without transparency about the process-based aspects of these new pedagogies, TEs will have no choice but to continually retrace the steps of others, rather than building upon their work and fostering the development of a pedagogy of teacher education that necessarily underpins practice-based work. It is not only the literature that must provide a foundation for the professional development of TEs in new ways. TEs must also develop mechanisms to support their growth as they transform their pedagogies of teacher education to embrace practice-based approaches in teacher education. We argue that self-study provides an important vehicle for doing so. The evidence from this self-study demonstrates that our collaboration developed our understanding of how to use practical experiences to inform the conceptual knowledge of both our novice teachers and ourselves.

As we have demonstrated, our collective engagement mediated the co-construction of a symbiotic interaction between episteme and phronesis. As we moved back and forth between these ways of knowing we refined our both our pedagogy and our conceptual understanding. We believe that this recursive pattern of interaction shows promise as a model for supporting and examining the development of other TEs engaging in the new territory of practice-based approaches to teacher education.

6. Implications and conclusion

The findings from this study illuminate key challenges of engaging novice teachers in teacher education experiences that focus on *doing* practice, rather than *talking about* practice. We believe the FA's experiences are informative because they represent the kind of developmental journey that many TEs will experience as they undertake practice-based work. If we are to truly engage in practice-based pedagogy in teacher education, the field would do well to provide more transparency in the kinds of decision-making and processes that TEs undertake to discern the foundational components that are used to define and enact practice, as well as the challenges and opportunities that are part and parcel of doing this new kind of teacher education. Without scholarship that provides detailed examples of the development of TE episteme through practice, we will continue to lack a sufficient foundation to support TEs to undertake this work.

Self-study is a helpful mechanism for TEs who are engaging in teacher education pedagogies for which there is little guidance from previous research. While some of the work in self-study has explored the demands of engaging novice teachers with practice through explicit modeling (e.g., Berry, 2007; Korthagen et al., 2006; Loughran & Berry, 2005; Loughran, 1996; Lunenberg et al., 2007), the work by scholars in core practices has not done so, and there is little interaction in the scholarship in core practices and self-study. Given the novelty of this pedagogy of teacher preparation, such a fusion of these two areas of scholarship will be informative to all TEs as we undertake the major revisions to teacher education that practice-based approaches require.

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