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Deconstructing Pre-service Teachers' Field Experience Narratives: The Role of Epistemological Beliefs

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Deconstructing Pre-service Teachers' Field Experience Narratives

The Role of Epistemological Beliefs

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Field experiences are defined as situations that provide pre-service teachers (PTs) actual contact with students in a natural setting while allowing for the possibility of manipulating instructional variables (Seiforth & Samuel, 1979). Cited as one of the most critical features of effectively preparing teachers for the classroom by the National Council for Accreditation of Teacher Education, structured and systematic field experiences are viewed as essential to teacher programs (2010). Field experiences carry numerous benefits including opportunities for PTs to connect classroom theory to practice, foster critical thinking, and reflect upon various instructional practices seen in action (McGlamery & Harrington, 2007). Field experiences help PTs determine if teaching is the appropriate career choice by providing opportunities to see themselves as teachers (McIntyre, 1983).

Field experiences may take on a variety of settings, including public and/or private school classrooms, church programs, or individualized tutoring experiences, which can introduce challenges in identifying venues appropriate to meet the needs of individual PTs. Some key concerns related to field setting selection include a close match between the philosophy of a pre-service program and the field venue, required duties for PTs that fit current teaching competencies, and settings that offer a continuum of learning experiences ranging from simple tasks (e.g., assisting with snacks) to more complex and demanding tasks (e.g., one-to-one instruction, organizing and maintaining a classroom schedule) (Macy, Squires, & Barton, 2009). Central to all venues, however, should be the ability for PTs to generalize observed instructional strategies to a variety of settings and contexts as well as the opportunity to work with skilled teachers that model the instructional strategies. Furthermore, field experiences should provide frequent and varied feedback in settings that assist PTs in meeting their individualized career goals (e.g., a PT interested in working with children with autism should be in a classroom with a child with autism if possible) (Macy et al., 2009).

Beyond setting selection, PTs experience additional challenges in field experience selection. Individual characteristics, including past teaching and learning experiences, knowledge about learning, dispositions, beliefs, attitudes, and perceptions, greatly influence the teachers PTs become (Minor, Onwuegbuzie, Witcher, & James, 2002). One personal characteristic of particular interest to teacher development are epistemological beliefs, defined as beliefs about teaching and learning. Helping PTs realize personal epistemological beliefs is necessary to prepare them for real-world teaching (Yilmaz & Sahin, 2011). First-hand experiences with students in field placements often create dissonance between and connections to epistemological beliefs, which can better prepare PTs to meet the needs of their students when they become teachers (Eisenhardt, Besnoy, & Steele, 2011).

Epistemological beliefs consist of five independent dimensions: certain knowledge, simple knowledge, omniscient authority, innate ability, and quick learning. Each dimension is represented on continuum ranging from a naïve to a more sophisticated perspective (Schommer, 1990). For instance, in response to the following item assessing certain knowledge, "sometimes there are no right answers to life's big problems," a naïve learner tends to strongly agree with the statement while a sophisticated learner strongly disagrees. Students' epistemological development starts with a naïve belief of knowledge as certain and right or wrong and moves toward a sophisticated understanding that knowledge is relativistic in nature (Chai, Khine, & Teo, 2006). Epistemological beliefs influence how students monitor the acquisition of knowledge (Ryan, 1984), the depth to which individuals learn (Schreiber & Shinn, 2003), and students' learning strategy selection (Hofer & Pintrich, 1997). Generally, the more sophisticated one's epistemological beliefs (i.e., the less one believes in certain and simple knowledge, omniscient authority, quick learning, and innate ability), the higher their academic performance (Cano, 2005; Schommer, Calvert, Garigliety, & Bajaj, 1997).

Researchers investigating PT development often examine how teacher education programs shape epistemological beliefs. Results suggest that as PTs progress toward graduation, they tend to hold more sophisticated epistemological views (Chai et al., 2006), and that as teachers grow professionally, this sophisticated view expands as they gain a sense of being a constructor of knowledge (Brownlee, 2001). For instance, Doyle (1997) found that PTs' beliefs progressed from viewing teachers as delivering information to passive students to beliefs that students are active in the learning process with teachers as facilitators of information. Experiences gained while teaching in the field, the ability to reflect on those teaching experiences, the length of time in a teacher education program, and the amount time in the field facilitate development in epistemological beliefs from naïve to more sophisticated (Doyle, 1997).

PTs need to move beyond naïve beliefs of thinking to view teaching as something other than telling and to understand how to use instructional strategies as methods for building new learning (Holt-Reynolds, 2000; White, 2000). For instance, PTs who endorsed the sophisticated belief that knowledge is constructed rather than being simple and certain were more likely to

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endorse instructional strategies that focused on active student involvement such as role playing (Wilson, Konopak, & Readence, 1994). Beginning teachers often believe that they hold constructivist beliefs about learning, however, they are unable to translate beliefs into action in the classroom (Richardson, 2003). Perhaps this inability stems from PTs comfort with a didactic approach to learning because a constructivist approach is too experiential, requiring the relinquishment of authority while responding to and building on students' ideas (Chai et al., 2006).

The purpose of the current study was to examine PTs' epistemological beliefs, and more specifically, to determine whether these beliefs manifest in perceptions of a field experience. No study to date that we are aware of has examined PTs pre-existing beliefs about teaching and learning, and subsequent perceptions of teaching while in a PT program. To measure epistemological beliefs, participants completed the Epistemological Beliefs Inventory (EBI) (Schraw, Bendixen, & Dunkle, 2002). Following participation in a course mandated field experience, participants provided insight into the perceived value of the experience, including goals and expectations at the onset, most and least enjoyable aspects at the outset, the utility of the experience, and the most surprising features of the experience. We expected patterns to emerge within narratives dictating perceptions of PTs fieldwork experiences based on EBI classification as either a naïve or a sophisticated learner.

Method

Participants

A total of 115 PTs (96 females, 19 males, *M* age = 22) enrolled in undergraduate educational psychology courses at a large, public, southeastern university volunteered to participate. Participants received extra course credit as compensation, and those choosing not to participate completed an alternative assignment for equal extra credit. The majority of participants had no prior teaching experience (74.8%).

Materials

Participants completed two surveys. The EBI measures beliefs about knowledge and the nature of knowing (Schraw et al., 2002). The EBI consists of 32 items aimed to measure the five dimensions of epistemological beliefs: certain knowledge (seven items), simple knowledge (eight items), omniscient authority (five items), innate ability (seven items), and quick learning (five items). Item examples include, "It bothers me when instructors don't tell students the answers to complicated problems" and "People who question authority are trouble makers." [1] Item examples are rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores on the EBI indicate more naïve epistemological beliefs, while lower scores indicate more sophisticated beliefs. The EBI reliability coefficient reported in previous research ranges from .67 to .87 (as reported in Teo, 2013). The current study reports a moderate reliability coefficient of .74 that lies within the previously reported range.
The Field Experience Survey consists of 10 open-ended questions to assess perceptions of a field experience in teaching (see Appendix). Survey items were written by the

[1] For the full survey contact ncommander@gsu.edu or carolashong@yahoo.com

researchers of the current study, instructors with several years' experience working with undergraduates in teacher education programs requiring a field experience component.

Procedure

All participants fulfilled the field experience requirement as outlined in their course syllabus. After completion, a researcher who was not the course instructor administered a consent form and the two surveys at the end of a regularly scheduled class session. Surveys were completed self-paced and in random order, taking approximately 30 minutes.

Data Analysis

Epistemological Belief Inventory

We followed procedures used by Braten and Strosmo (2006) to classify participants as naïve or sophisticated based on EBI results. Participants were classified not by the five EBI specific dimensions but rather by their overall personal epistemological beliefs. An overall EBI score was generated for each participant by calculating the average of the 32 survey items. Based on the sample mean, participants with an EBI score more than 2.72 were classified as naïve (n = 47), and participants with an EBI score of 2.72 and below were classified as sophisticated (n = 68). An independent samples t-test confirmed that sophisticated learners (M = 2.53, SD = .20) provided significantly lower ratings on the EBI than naïve learners (M = 3.06, SD = .18), $t(113) = -14.83$, $p = .01$. These findings support a reliable distinction between sophisticated and naïve learners based on current study EBI responses.

Field Experience Survey

Responses to Questions 1 and 2 of the Field Experience Survey, regarding setting and hours, respectively, were analyzed in terms of general descriptives. Two-thirds (66%) of respondents' field experiences took place in schools. Of those, 41% were in public schools, 32% were in private schools, and 27% were not identified. Other settings for field experiences were tutoring centers (16%), churches (10%), community centers (5%), or other (3%). Results regarding time in the field indicated that most (91%) respondents' experiences involved approximately 10 hours in the field as required by their undergraduate educational psychology course instructor.

Questions 3-10 of the Field Experience Survey addressed personal and professional goals, expectations, the most and least enjoyable aspects of the field experience, usefulness of field experiences for developing teaching and learning skills, and what was most surprising about the field experience, respectively. These open-ended items were analyzed using Atlas.ti, a sophisticated computer-assisted qualitative data analytical program (CAQDA) that allows for the linking of codes to text in order to develop hypertext that permits one to perform complex model and network building. It should be noted that the use of a CAQDA aids in the mitigation of two significant problems in qualitative research. As Dohan and Sanchez-Jankowski (1998) point out, dramatic text can be misinterpreted as more significant than other text and more recently reviewed narratives are likely to be remembered at the expense of earlier narratives. And, as

Ward (2007) suggests, qualitative data analysis places the qualitative researcher directly into the research, interpreting interpretations, making, unmaking, and remaking stories. So, while coding is a dialectical process (as well as cognitive activity), a CAQDA is essential if one is to go beyond a traditional domain analysis that may be "subject to subjectivity," and move the analysis into a more robust procedure that helps control for research biases.

Qualitative coding was performed at the word, sentence, and paragraph levels using open thematic coding techniques. Atlas.ti facilitated the collaboration of the researchers in the coding process in that the hermeneutic unit (student narrative documents, codes, notes, and networks) was shared and edited by the researchers during the coding and analytical phases. One of the strengths of such a collaborative environment is that the skills of each researcher can be fully explored and utilized.

Important to note is that methodologically sound qualitative data analyses can reveal conceptual constructs and linked relationships within written narratives. As Strauss and Corbin (1990) suggest, such concepts and relationships, along with the integration of data collection and comparative analysis, serve to establish specific linkages to broader conditions, actions, and consequences. It is in the representativeness of these concepts and their narrative relationships that one can begin to construct a theoretical framework that accommodates a mixed-methods model. Ward and Commander (2011) note that such models contribute to a sound methodological approach resulting in a better understanding of research findings. In the current study, the qualitative concepts that each student narrative generated were linked directly to each individual's EBI score. The resulting relationships moved the research out of simple quantifications or narrative presentations into a more in-depth analysis whereby convergent and divergent narrative concepts become stabilized by the quantitative data. In other words, by linking individual EBI scores to individual text, we were able to make sense of the diverging and converging conceptualizations found in the student narratives. An important methodological result is the ability to replicate such an analysis.

Results

Themes

By linking the naïve/sophisticated scores on the EBI with each individual's narratives expressed in the Field Experience Questionnaire, a number of important themes emerged that contributed to a clearer understanding of the perceived differences that evolved between the two types of learners in an applied setting. The more salient themes considered personal goals, professional goals, expectations, most and least enjoyable aspects, usefulness in developing learning and teaching skills, and most surprising aspect of the field experience. While one question asked how useful the field experience was in developing learning and teaching skills, most responses were simply "very useful" and provided little substantive information.

Personal goals.

This thematic area in the narratives illustrated a noticeable difference between sophisticated and naïve learners. In terms of describing personal goals of the field experience pertaining to a career

in teaching, the majority of the responses from students identified as sophisticated learners indicated an interest in better understanding how the schools operated in a larger system. These comments often reflected a more holistic, macro perspective, such as:

> *"I wanted to know how Georgia middle schools (I never went to middle school in Georgia) were like, how they were organized, what curriculum they taught, what was expected, not expected. I wanted to learn from this teacher and I wanted to see if for sure this was the right direction, grade level, major for me."*
>
> *"Discover how normal day-to-day operations work in a school. Get more of a behind the scenes look at teachers' attitudes toward students and their profession."*
>
> *"To get a better understanding of how the school operates."*

The majority of responses from students identified as naïve learners tended to focus more on their individual fit with teaching as a career, or what might be considered a more micro, "me"-centered perspective, such as:

> *"I hoped to reveal to myself if this is the exact grade level I plan to teach at, based on the maturity of the kids and the difficulty of the curriculum."*
>
> *"Seeing which age group I wanted to teach."*
>
> *"I really wanted to see if this is where I wanted to be in the future."*
>
> *"To make sure this is what I want to do (I still do)."*
>
> *"See if this was the right age group for me."*
>
> *"Whether or not I truly liked my major."*
>
> *"To find out if this was the right career choice for me."*
>
> *"To decide whether teaching was something I was sure I wanted to do."*

Professional goals.

While there was little difference between learners in terms of the number of narratives that focused on establishing positive relationships with students and learning effective teaching techniques, methods, and styles, there were striking differences in the types of relationships, techniques, methods, and styles each group wished to learn. For example, of the statements that focused on the professional goal of establishing relationships or connections to students, 67% were from sophisticated learners. Of the 33% of naïve learners who articulated the goal of connecting to students, there were distinct differences in narrative content compared to sophisticated learners. For example, sophisticated learners were more likely to want to establish

close working relationships in order to facilitate the learning process for their students and themselves. Examples from sophisticated learners include:

> *"To work with the children and experience their learning processes, as well as recognize processes and methods of learning so that I can be successful in varying my own teaching methods. I also wanted to be able to connect with a child and relate to him/her well."*
>
> *"Some professional goals I had personally were to become more familiar with the classroom and how to interact with students. I wanted to see what techniques the teacher used and how successful they were for the students."*

Naïve learners were likely to focus on assessment and control within the relationships. Examples from naïve learners include:

> *"I hoped to improve my teaching by assessing performances and talking to the students."*
>
> *"I wanted to really impact these girls' lives. I hope to prevent them from bad decisions and watch them grow."*

Additionally, there were differences in the way sophisticated learners viewed student relationships within the context of the classroom experience. Examples include:

> "*Gain understanding of how teachers deal with many personalities, cater to their students' personalities and teach."*
>
> *"To better understand how a classroom really works and whether the theories we discuss in school actually apply."*

For naïve learners, the focus was on learning how to control the classroom. They made statements such as:

> "*I wanted to learn different and creative ways to teach and enforce discipline."*
>
> *"Get ideas on how to teach and discipline my future students."*
>
> *"To see how a teacher can control a classroom by herself."*

Expectations.

Differences between the two groups of learners in terms of their expectations regarding field experience were clear. A large majority (89%) of the sophisticated learners' statements reflected an active engagement in the experience, such as:

> *"I expected to acquire better skills."*

"I wanted it to be really fun and also wanted to sink into the perspective of the teacher I observed."

"I hoped for it to give me different perspectives on teaching and to learn from my observations of the students and other educators."

In contrast, 58% of the naïve learners reflected a more passive position, using words like "to see" or "observe" more often in their statements:

"To see all the methods the teacher used for teaching new material to the students."

"To observe and learn how to handle different classes, students and to see how high school students learn."

Most enjoyable aspect.

When asked to write about the most enjoyable aspect of the field experience, 56% of the sophisticated learners cited the interaction with students as most enjoyable compared to just 44% of the naïve learners. The following statements are representative of both groups.

"Interacting with the children. The teacher let them ask me questions."

"The most enjoyable aspect of my experience was the kids, talking to them, interacting with them, etc."

"Definitely being able to interact with the kids. I think I enjoyed reading with them the most. They were really into the books."

"Just working with the children was so enjoyable; it got me excited about my future."

"Playing, reading, and helping the children. I really did enjoy interacting with them."

Although the majority of the remaining 56% of naïve learners still mentioned interaction with children as the most enjoyable aspect of their experience, their narratives reflected a more passive position relative to sophisticated learners. They enjoyed "watching the kids learn," or "seeing them love to learn," whereas the sophisticated learners' language remained more interactive by using phrasing such as "working with," "reading to," or "playing with."

Least enjoyable aspect.

While a third of both sophisticated and naïve learners mentioned teachers and students as the least enjoyable aspect of their field experience, the focus of the learners was remarkably different. The majority (86%) of sophisticated learners positioned the teacher as the primary factor hindering enjoyment, while 78% of the naïve learners focused on students. Sophisticated learners made comments such as:

"The teacher made the field experience a nightmare because she was inconsiderate to students of different cultures. She was also mean to men when I was present."

"*The least enjoyable aspect of my field experience was that [the teacher] kept answering her phone."*

"The least enjoyable aspect of my field experience was seeing the teachers yelling at the students when they were doing something wrong instead of calmly helping them fix what was wrong."

Naïve learners made comments such as:

"Seeing how lazy the students were."

"The frustrating moments when my student fell back into his old ways of speaking and moments of relapse."

"The least enjoyable was having to maintain order and try to help them stay focused."

Most Surprising.

The majority of comments from all learners were positive in content (69% for sophisticated learners and 72% for naïve learners). Both groups were surprised that much of the curriculum focused on standardized testing or did not reflect, in reality, the educational theories they were learning in teacher education courses. Their thoughts were reflected in statements such as:

Both groups were surprised that much of the curriculum focused on standardized testing or did not reflect, in reality, the educational theories they were learning in teacher education courses.

"The most surprising thing about my field experience was how much time small children spent preparing standardized testing."

"How standardized testing material was integrated in the lesson plans. The students were unaware what they were learning would be useful in taking their CRCT tests and ITBS tests, as well as general knowledge for their future learning."

"The most surprising aspect of my [fieldwork experience] was to learn that some theories don't work as well as the book says."

"The amount of time and work needed to help out each student. Students can't be generalized in one main category. Each one had different needs and it was very challenging to try to meet each of those needs."

An interesting thing to note is that sophisticated learners were more likely to be surprised that behavioral problems existed and naïve learners were more likely to be surprised that they did not exist. Sophisticated learners made comments such as:

> *"What I found most surprising was that many of the students were not motivated and most of the teachers did not help to motivate them."*
>
> *"The behavioral problems and how much children disobey the teachers."*

Whereas, naïve learners made comments such as:

> *"The same problems that are in the urban community can be found in the suburban communities as well."*
>
> *"I was surprised with the kids' behavior. On the whole they were very well behaved."*
>
> *"That a bad classroom can turn into a good class."*

Discussion

The purpose of the present study was to investigate perceptions of field experiences from PTs holding different epistemological beliefs. A key finding is regarding PTs' perceptions of student–teacher relationships in the classroom. A larger percentage of naïve learners were concerned with classroom management and learning how to control behavior problems, while sophisticated learners spoke more positively about the students themselves, noting their personalities rather than their behavioral problems. Moore (2003) indicated that concerns with classroom management are one type of procedural concern perceived as important to teaching success by a majority of PTs. Such concerns are well documented, and research has continuously shown classroom management is key to success (Cakmak, 2008; Emmer, Evertson, & Worsham, 2000). Based on our results, perhaps instructors of teacher education programs and instructors observed as part of field experiences should share their classroom management approaches.

While a somewhat similar percentage of sophisticated and naïve learners describe personal and professional goals for the field experience as learning teaching methods and techniques, a higher percentage of sophisticated learners viewed the field experience setting in a broader context, wondering how schools fit into a larger system. These findings suggest that instructors may wish to directly encourage this broader view before PTs enter the field, perhaps by providing specific information about the larger context of the various sites eligible for field experience completion. Furthermore, a larger percentage of sophisticated learners said they expected to take an active role in the classroom, noted engaging with students as the most enjoyable aspect of the field experience, and described dissatisfaction with the teachers as the least enjoyable aspect of the field experience. In contrast, a larger percentage of naïve learners held a more narrow perspective of the field experience setting, saying that they anticipated taking a passive role in the classroom and considered students to be the least enjoyable aspect of the experience.

Our results suggest that designers of field experiences should build in important opportunities for reflection during the field experience. Open-ended questions such as, "If you could restructure the lesson, what might you do differently?" allow for reflection on teaching strategies and what may be changed for the better next time. Additionally, a large majority of practicing teachers often report that teaching is more difficult than anticipated (Lortie, 2002). Therefore, teacher development programs need to strongly guide students before, during, and after their field experiences. Teacher education courses could incorporate class discussions to address previous and current reports from PTs about their field experiences, with frank conversations about expectations and goals prior to time in the field.

Current results illustrate another instance of the influence of pre-existing beliefs on PTs' development as teachers. Since beliefs impact PTs' understanding of the multifaceted process of teaching and learning, creating opportunities for students to reflect on and compare their belief systems would enhance teacher education programs. Findings of this study underscore the need for teacher educators to engage in efforts to foster more mature epistemological outlooks in developing teachers. Nist and Holschuh (2005) note that researchers investigating epistemological beliefs rarely share results with students, suggesting that creating awareness of beliefs may help students move toward more mature epistemological perspectives. Chai et al. (2006) stated that fostering an understanding of personal epistemology for PTs serves a dual purpose of helping them to develop personally and sensitizing them to be more aware and active in creating an "epistemologically conducive learning environment" (p. 296). Early in teacher education programs, instructors could possibly use an epistemological screen, class discussions, or informal surveys that would foster individual awareness of less sophisticated beliefs.

A reliable distinction emerged between our participants according to their naïve or sophisticated beliefs regarding teaching and learning. An assumption often made in the literature is that PTs' beliefs about teaching and learning are largely naïve and idealistic (Paine, 1989). Perhaps this assumption stems from empirical evidence from university programs where PTs are mostly young, female, white students with small-town backgrounds (Zumwalt & Craig, 2005). As our study sample was also predominantly female, one might expect results to support this naïve assumption. However, current analyses support a reliable distinction between sophisticated and naïve learners based on EBI responses, and more learners displayed sophisticated beliefs.

Teacher education courses could incorporate class discussions to address previous and current reports from PTs about their field experiences, with frank conversations about expectations and goals prior to time in the field.

The sample in the current study from a teaching program in an urban university represents a racially diverse student population, possibly attributing to differences in epistemological beliefs. Future research should consider the diversity of PTs and resulting learning styles and field experience perceptions. Designers of field experiences should note that PTs bring different beliefs, often both naïve and sophisticated, into their programs. Therefore, for many students, beliefs may need to be strengthened or developed rather than changed (Tanase & Wang, 2010).

To our knowledge, this is the first study to examine epistemological beliefs of PTs and perceptions of a field experience. However, measuring epistemic beliefs is extremely difficult. DeBacker, Crowson, Beesley, Thoma, and Hestevold (2008) investigated three self-report measures, including the EBI, and found psychometric problems with each of the three instruments. More recently, Teo (2013) reported issues with the psychometric properties of the EBI. Given the challenges of measuring the multidimensionality of the construct of personal epistemology, a general measure of sophisticated and naïve learners may be a more practical approach. An important strength of the current study is the integration of the general measure from the EBI with a systematic narrative analysis on perceptions of field experiences, not previously seen in the literature. As previously discussed, consideration of differences in qualitative responses based on participants' epistemological belief system allowed us to understand the diverging and converging ideas found in the narratives. Thus, this study presents an example of a methodological process for replicating qualitative analysis. Furthermore, our study is limited in terms of identifying overarching themes in PTs' narratives as we emphasized a binary distinction between sophisticated and naïve learners. Future research could recognize potential overarching macro-level themes.

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Appendix

Field Experience Questionnaire

Demographic Information: Age _____ Gender _____

Prior Teaching Experience (if applicable):

PLEASE NOTE THAT YOU SHOULD ANSWER ALL QUESTIONS BELOW REGARDING THE FIELD EXPERIENCE YOU DID FOR THIS CLASS ONLY:

(1) Briefly describe the type of field experience you participated in this term (e.g., tutoring, community organization, private or public school classroom, other)?

(2) How many hours were you required to spend "in the field" for your field experience?

(3) What personal goals did you hope to meet with your field experience?

(4) What professional goals did you hope to achieve with your field experience?

(5) What expectations did you have for your field experience?

(6) How useful was the field experience for developing your teaching skills?

(7) How useful was the field experience for developing your learning skills?

(8) What was the most enjoyable aspect of your field experience?

(9) What was the least enjoyable aspect of your field experience?

(10) What did you find most surprising about your field experience?