It's Not As Easy As It Looks": Preservice Teachers' Insights about Teaching Emerging from an Innovative Assignment in Educational Psychology

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Preservice teachers (PTs) tend to enter teacher education programs with naïve understandings of the nature of teaching. In order to enhance their development of the knowledge, skills, and dispositions needed to be an effective educator, I designed an innovative Educational Psychology assignment in the practice of teaching. PTs (N=48) formed four-person teams and taught a lesson to their peers that was recorded using digital video. They then watched a DVD of the lessons they taught and each completed a guided reflection task on the experience. Responses were analyzed to identify PTs' self-reported insights about teaching. Findings indicate the emergence of new understandings regarding planning and organization, pedagogical strategies, delivery, content knowledge, and classroom management. Implications and recommendations for instructors are offered.

The task of learning to teach is a complex undertaking for preservice teachers (PTs). When PTs enter Educational Psychology courses they become involved in the challenging journey of encountering new information, experiences, and perspectives about the nature of teaching and learning. Ideally, those who fully engage in this process have a meaningful learning experience; they acquire useful and effective insight, skills, habits, attitudes, and/or understanding relevant to the multifaceted interactions of teaching and learning.

PTs studying principles of Educational Psychology are embarking on a lifelong developmental process of learning to teach. Educational research indicates that PTs' prior knowledge about teaching and learning and the methods of college instruction to which they are exposed both shape their development. Studies have found that PTs' preexisting beliefs can support or interrupt their capability to develop a thorough understanding of the multifaceted process of teaching and learning. Research has also examined and documented components of effective college teaching used in successful teacher education programs. Together these two bodies of literature identify recommendations for pedagogy and learning activities that can help to facilitate PTs' development in terms of the knowledge, skills, and dispositions needed to be an effective K-12 teacher.

PTs Prior Knowledge about Teaching

Cognitive research has clearly shown that students come to K-12 classrooms with an already constructed set of ideas, beliefs, and perspectives about the content area under investigation (Bransford, Brown & Cocking, 2000). The same holds true for students who enter teacher education programs. Unlike almost all other professional training programs, PTs come to their teacher education coursework having already spent 12 or more years observing teachers in action. This "apprenticeship of observation" (Lortie, 1975, p. 61) has provided PTs with multiple opportunities to construct their own ideas about the nature of teaching and learning. The resulting problem is that during these years of observation, PTs have learned intuitively about teaching and thus, they tend to underestimate the difficulties involved in the profession (Lortie, 1975). This means that a majority of PTs come to teacher education programs with very definite, yet often simplistic, ideas about the nature of the teacher's role. For example, Larabee (2002) suggests that the perception that teaching is easy is "endemic among teacher candidates" (p. 231). Research also indicates that PTs tend to believe that teaching is defined as telling, the teacher's primary responsibility is to cover the curriculum, classroom management is unrelated to instruction, and students are not active contributors to the teaching-learning process (Russell, 2002). Supporting the assertion that these beliefs are counter-productive is a study reported in Lortie (2002), in which 90% of

practicing teachers indicated that teaching was more difficult than they had originally expected.

These naive assumptions about the nature of teaching can be problematic in Educational Psychology courses because they may actually interfere with the learning of new concepts (Bransford, Brown, & Cocking, 2000); PTs' pre-existing ideas can limit or impede what they are willing and or able to learn in their coursework (Lin, Gorrell, & Porter, 1999). In fact, unrecognized and unaddressed misconceptions may grow in strength and over time become more difficult to resolve (McDevitt & Ormrod, 2005).

Fostering constructive mental models in PTs' understanding of the nature of teaching and learning can be challenging work because PTs (and most human beings for that matter) are inclined to preserve rather than modify their pre-existing beliefs. Many factors appear to contribute to this tendency to maintain misconceptions, even when presented with evidence to the contrary (e.g., strength of prior knowledge and beliefs, existing biases and dispositions, long-standing personal epistemologies and social judgments, and interpersonal motives) (McDevitt & Ormrod, 2005).

One tendency particularly relevant to PTs studying Educational Psychology is the difficulty inherent in recognizing the influence of tacit (or implicit) knowledge on thinking and behavior. Cognitive psychologists have demonstrated the existence of tacit knowledge and have shown how difficult it can be to modify a belief that is not in conscious awareness (e.g., Kagan, 1992). Thus, if PTs in Educational Psychology class are not consciously aware of their tacit assumptions and beliefs, they will have difficulty adjusting them, even when presented with conflicting information (Kagan).

A second tendency relevant to PTs studying principles of Educational Psychology is confirmation bias. This construct refers to the human tendency to search for or interpret information in a way that supports existing beliefs while at the same time ignoring or reinterpreting disconfirming evidence (Brehm, Kassin, & Fein, 2005). Research around the phenomenon of confirmation bias reveals that misconceptions can act as a filter that admits information that fits the thinker's existing mental model, but rejects information which might cause cognitive disequilibrium (Bransford, Brown, & Cocking, 2000). Thus, PTs who enter Educational Psychology courses will tend to go through their coursework looking (often unconsciously) to maintain, rather than adjust, their preexisting knowledge and beliefs about teaching and learning.

Given the serious implications of PTs' naïve mental models, Lortie (2002) calls upon teacher educators to "come up with approaches that will help beginners increase their awareness" (p. xi). Since they teach what is often one of the first courses in the preservice teaching program, instructors of Educational Psychology have a responsibility to use best practices in college teaching to offer learning experiences for that will give PTs opportunities to develop more grounded, more constructive understandings of the what it means to teach and learn.

Components of Effective College Teaching

The body of literature examining best practices in college teaching has identified a number of important variables relevant to effective pedagogy in teacher education courses. In order to develop a deeper understanding of teaching, PTs need opportunities to uncover and examine their tacit beliefs about the nature of teaching and learning. When coupled with experiential learning and reflection opportunities, PTs can begin to make solid links between theory and practice and construct an expanded understanding of what it means to teach and learn.

One theory of learning (Argyris & Schon, 1974) relevant to this study suggests that superficial learning (referred to as "single-loop learning") involves problem-solving by looking for a solution within the existing framework of foundational values and beliefs. This is contrasted with meaningful learning (referred to as "double-loop learning") in which solutions are discovered by critically examining the underlying foundational values and beliefs. This process often involves radical changes in beliefs and strategies. Thus, in double-loop learning, assumptions underlying current views are questioned and hypotheses about behavior are tested publicly.

In the context of working with PTs studying Educational Psychology, the learning-to-teach process could be viewed as a complex and ill-structured problem. Single-loop or superficial learning would be the result when PTs engaged only in the processes of confirmation bias. However, double-loop or meaningful learning would be the result when PTs had opportunities to examine and adjust their foundational beliefs about the nature of teaching and learning. Recommendations for fostering such meaningful learning include: explicitly presenting information

and experiences that blatantly contradict what students believe (Sinatra & Pintrich, 2003); using experiential learning to link educational theory with real-world practice (Stevens & Richards, 1992); presenting contradictory information in written or videocase studies (McDevitt & Ormrod, 2005); and providing opportunities for guided experience and reflection (Pintrich, 1990; Griffin, 1999).

Experiential education is an approach that purposefully engages students in direct experience and focused reflection in order to increase knowledge, develop skills, and clarify values (Moon, 2004). Students are given assignments that allow them to make discoveries and experiment with knowledge themselves, instead of merely hearing or reading about the experiences of others. Students also reflect on their experiences and thus have the opportunity to develop new skills, attitudes, and ways of thinking (Stevens & Richards, 1992). In the context of teacher education coursework, experiential learning assignments would involve high levels of activity, critical thinking, real-world relevance, social interaction, and perceived risk (Standerfer, 2003).

Videocase study has been identified as one instructional innovation that is beneficial both in terms of process and outcome in teacher education (Beck, King, & Marshall, 2002). One specific use of videocase analysis asks PTs to observe their own teaching, evaluate their performance, and reflect on demonstrated strengths and weaknesses (Wedman, Espinosa, & Laffey, 1999). Even though the majority of PTs reported initial apprehension about watching themselves on tape, they overwhelmingly viewed self-analysis as extremely helpful and positive (Beck, King, & Marshall, 2002). Videocase self-analysis is a useful tool in teacher education because it allows PTs to gather information about self in an authentic, practical setting (McCurry, 2000), enables the PTs to view their teaching performance with some objectivity, and provides opportunities for PTs to practice personal reflection (Norton, 1997). Such grounded reflection by PTs encourages logical analysis of teaching, supports changes in practice, and helps bridge the gap between theory and practice (Lauer, 1999).

Our Current Context

In the teacher education program at Montana State University, Educational Psychology is a required course for undergraduate elementary and secondary PTs and serves as a prerequisite for acceptance into the program. The course for secondary education majors is specifically designed to cultivate students' professional knowledge of central theories related to learning, teaching, and motivation for adolescent students. Through lecture, discussion, group work, and assignments, students are invited to grapple with theoretical principles of teaching and learning, apply these principles to various classroom scenarios, and begin to think, write, and communicate as reflective practitioners.

One of the challenges we face in our teacher education program at Montana State is geographical in nature; we are located in a small city in an agricultural valley in the Rocky Mountain region. We have a low population density and a relatively small number of schools within a 60-mile radius of the city. This means that all classrooms available for student placement (i.e., those within reasonable driving distance) are filled to capacity with students enrolled in methods courses and student teaching. Since the Educational Psychology course is positioned as a prerequisite to entrance into the teacher education program, there are literally no classrooms available in which to place our Educational Psychology students for early field experiences, classrooms in which PTs' ideas about teaching could be experientially examined, tested, critiqued, and adjusted.

Given that this aspect of our current context was not likely to change in the foreseeable future, a while ago I designed a Team Teaching assignment for my Educational Psychology course to give students an authentic opportunity to personally engage with the principles of teaching and learning. My hope was that this assignment would serve as a mediating link between the students' understandings, the theoretical principles, and their eventual classroom practice (Pintrich, 1990). This assignment required students to work in self-selected teams of four to five members to plan and teach a lesson on one aspect of Educational Psychology to the rest of the class, specifically utilizing the theories of teaching and learning that had been explored during the first half of the course. After their lesson had been taught, PTs submitted a self-evaluation of their learning from this assignment. An informal review of their responses indicated that PTs believed the assignment was worthwhile; however, their insights about the teaching tended to be generic and superficial in nature.

Research on experiential learning (Stevens & Richards, 1992), videocase studies (Beck, King, & Marshall, 2002), and guided experience and reflection (Pintrich, 1990; Griffin, 1999) suggested to me that deeper PT learning about teaching might

be promoted by videotaping each team's lesson so that they could see and evaluate themselves in action. In order to evaluate the educational value of this innovation, this study examined PTs' self-reported insights and understandings about the nature of teaching and learning as represented in their responses in the guided reflection task after viewing a videotape of the lesson they taught. Two research questions guided this study:

1. How did PTs rate this assignment in terms of its value and relevance to their process of learning to teach?

2. What new insights and understandings about teaching did PTs report in their reflective writing as acquired from participating in this assignment?

METHOD

PTs in one section of Secondary Educational Psychology were required to form self-selected teams of four to five members and choose a topic which they would teach in a 50 minute lesson to the whole class; they were given a list of possible lesson topics from which to choose that were appropriate to the course outline. The whole class received instruction regarding lesson planning, and each team also met with me outside of class to receive topic-specific coaching for planning their lessons. During these meetings, I functioned as a coach: guiding, but not dictating, their instructional choices and consequent lesson plan; and as a model: engaging in professional "think-alouds" to model the habits of mind I employ in the lesson planning sequence (van Someren, Barnard, & Sandberg, 1994).

As each team presented their 50-minute lesson, I videotaped them using a digital video camera mounted on a moveable tripod and captured the best sound quality possible using four suspended microphones. When the lesson was complete, I downloaded the tape to computer, burned the digital video to DVD, and made enough copies so that each member of the team received an individual copy of the lesson. Students were asked to watch their DVD in its entirety and then complete a guided reflection task on the whole assignment (Appendix A). These written responses were submitted for grading; the response was worth 20% of each student's grade for the assignment and contributed a maximum of 5% to the final course grade.

Participants

These data were collected from 48 PTs preparing to teach secondary education. The group was composed of 23 males and 25 females. These students were in various stages of their academic careers; there were 4 freshmen, 15 sophomores, 21 juniors, 3 seniors, and 5 post-baccalaureate students. They also represented a wide range of majors: 13 in Science, 12 in English, 8 in Health and Human Development, 4 in Math, 4 in Technology Education, 2 in History, 2 in Social Studies, and 1 in each of Art, Music, and Agriculture. In this group of PTs, 35 of 48 (73%) reported they had little or no teaching experience with adolescents. Seven (14%) indicated they had been a camp counselor or taught Sunday School classes for children, and six (13%) PTs indicated they had some coaching experience in their background.

Data Analysis

All PTs' written responses to the guided reflection task were collected and entered verbatim into a database. I chose to analyze the data inductively in order to ensure that the PTs' perspectives were accurately represented in the results (Lincoln & Guba, 1985). In this light, I began the analysis process with multiple readings of each participant's complete response to the guided reflection task. As I read through each PT's written response in its entirety, I identified key points, common aspects, and unique or divergent statements in the form of margin notes (Creswell, 1998). I used the common and distinct features to form a preliminary set of codes, and created a working definition for each preliminary code, which allowed me to manage the data in a systematic fashion. Next, I segmented each PT's response into distinct units that could be meaningfully coded. These segments were viewed as the unit of analysis. Third, in order to verify the accuracy of the preliminary codes, I selected a sample of the responses and asked a colleague unrelated to the study to assign a code to each segment. We met to compare our coding efforts and noted the similarities and differences in our assigned codes, discussing each segment that we had coded differently until we either agreed on its code or created an additional code to appropriately represent its meaning (Cockrell, Placier, Cockrell, & Middleton, 1999). Finally, I organized the coded data into overarching categories that I believed would accurately represent the complexity of the data and best answer the study's research questions.

In order to test the validity of these final categories, I used the technical method as described by Constas (1992). A second colleague unrelated to the study was given an orientation to the investigation, an overview of the study's design, and a random sample of the data. He coded the selected portion of the data using the final category definitions (see below). Agreements and disagreements were recorded and the raw rate of agreement was 91%. In order to correct for chance, inter-rater agreement was calculated using Cohen's (1960) Kappa (K = .8537). These results can be interpreted as representing a strong level of overall agreement.

RESULTS

This study focused on an instructional innovation in an Educational Psychology course and was guided by two research questions. The first question sought to identify PTs' perspectives on the value and relevance of an instructional innovation in their journey of learning to teach. The second question sought to identify PTs self-reported insights and understandings about teaching as represented in their reflective writing.

Given that the majority of students (73%) in this course had little or no formal experience in teaching, this assignment was one of their first experiences of planning and teaching a lesson. Thus, it was not surprising that many (71%) found the assignment to be challenging (e.g., ("This is a lot harder than it looks, especially the amount of planning that goes behind one lesson."). For almost all the PTs, this assignment was the first time they had an opportunity to watch themselves teach. Some PTs found it intriguing (e.g., "I caught a better glimpse of how others view me"), while others found it a bit disconcerting (e.g., "I have a lot to learn"). While 6 students (12%) reported that they were uncomfortable viewing themselves on the DVD, all (100%) of the PTs reported that the experience of planning, teaching, and watching the DVD of their lesson was a valuable experience ("watching myself convey ideas to other was a real eye opener. I was able to see how I presented myself physically and emotionally. I now know where to improve and where my strengths are as a teacher").

Analysis of PTs' responses to the guided reflection task revealed five specific areas of new insight and understanding about teaching: planning and organization, pedagogical strategies, delivery, content knowledge, and classroom management.

Planning and Organization

One important category that emerged from 19 (40%) PTs' responses revolved around the time, effort, and value of the lesson planning that goes on behind the scenes in teaching (see Table 1). Many students shared new understandings about the amount of time it took to research, study, plan, and design a lesson. Their reflections indicated some surface-level prior knowledge about the amount of time required to plan an effective lesson, but this assignment provided a personal experience that appears to have made this concept more real to them.

TABLE 1

SUB-CATEGORIES (WITH EXEMPLARS) OF RESPONSES RELATED TO PLANNING AND ORGANIZATION

Sub-Category	PT Statement of Insight or Understanding
Amount of Time Required	"I learned that setting up the lesson plan can take lots and lots of time ... it's going to be a lot of hard work to become not only a teacher but a successful teacher."
Amount of Effort Required	"The most important lesson I learned is that preparing a lesson is hard work. Teachers always have told me that their job is not easy, but they were not joking when I had to prepare my lesson. I knew it wouldn't be easy but it still was harder than I thought."
Role of the Lesson Plan	"The lesson plan was extremely helpful in guiding my understanding of the subject ... it made me organize my thoughts and really hone in on the important meat of the lesson"
Necessity of Organization	"I learned the importance of organization. I didn't realize how organized you had to be to teach one lesson. This is something I will have to work on."

PTs were struck by the fact that the amount of effort and hard work required in the lesson planning process is not readily apparent (e.g., "Planning is more difficult than it seems.") Some were a bit taken aback by this fact, but many appreciated having this window into the profession early in their academic career (e.g., "This was a great exercise to get me to see the work involved in planning a class."). Other students first recognized the important role that lesson planning plays in the work of a focused and effective teacher (e.g., "This project has taught me a lot about all the needed preparation it takes to be effective.") A few students also commented on their new understanding of the importance of being organized as a teacher. One PT wrote that, "Organization is extremely important. Without a solid framework for our lesson, I didn't feel confident and didn't feel we had time to do everything we wanted to do

Pedagogical Strategies

Twenty-one (44%) of PTs reported some new understanding about the importance of selecting instructional strategies that will help to foster students' learning. PTs' reflections on this topic included insights about the importance of instructional variety, relevance to students' lives, and the importance of being purposeful in selecting student-centered pedagogies (see Table 2). PTs' also commented on the role of discussion in student learning, stating "this has showed me that class participation is very effective and provides a great way to evaluate learning and a great way to get the students to voice and hear different ideas that they may not otherwise have." A few PTs also recognized the interface between planning and pedagogy with statements such as, "I learned that I will need to prepare as a teacher to meet students' needs. It takes more planning to involve the class than talking at them."

TABLE 2

SUB-CATEGORIES (WITH EXEMPLARS) OF RESPONSES RELATED TO PEDAGOGICAL STRATEGIES

Sub-Category	PT Statement of Insight or Understanding
Importance of Variety	"I really enjoy the teaching process—in that I mean providing useful, interesting information in a variety of manners to effectively obtain and keep a student's attention so they can learn."
Importance of Relevance	"I need to engage students more and try to limit too much teacher centered, one-direction-flow of information. This could be accomplished by incorporating some more personal examples and also referencing content to examples in students' lives during the lecture."
Purpose of Facilitating Learning	"Before this assignment, I had not thought much about what was involved in being a teacher as far as truly tailoring my lesson plan to best help students learn in a way they will "experience" the lesson. I had always thought of activities I would use, but did not really understand the conceptual ideas behind them."

Delivery

As PTs watched the DVD of their lesson, an overwhelming majority of them (40/48 or 83%) became aware of aspects of their delivery that needed improvement in terms of verbal and nonverbal communication skills, professional appearance, and affect (see Table 3). In the area of verbal skills, PTs recognized the need to practice speaking more slowly, clearly, and loudly. They also identified the need to decrease the use of verbal "fillers" such as "um" and "ah." In the area of non-verbal skills, some recognized the need to reduce distracting gestures and excessive body movement and increase eye contact with students in the class.

PTs' responses indicated a growing awareness of the importance of a teacher's classroom presence and the range of factors that can contribute it. Insights included references to professional appearance, including posture, evidence of fatigue, and wardrobe. PTs also recognized areas in which they could strengthen their emotional presence with more confidence and enthusiasm. Some PTs identified specific signs of nervousness that needed to be addressed, while others discovered, in hindsight, that they did not appear as nervous as they had felt during the lesson. For example, one student expressed, "I was surprised to see how much control and confidence I had in front of a class."

TABLE 3

SUB-CATEGORIES (WITH EXEMPLARS) OF RESPONSES RELATED TO DELIVERY

Category	PT Statement of Insight or Understanding
Verbal Communication	• "Watching myself speak in front of a classroom I noticed that I have a lot to work on. I learned that I need to slow down in the talking." • "I learned I need to speak up" • "I need to speak more casually to the class, especially when I'm discussing stats and facts. I tend to sound too "lecturous." [sic]
Nonverbal Communication	• "I learned that I use my hands when I talk way too much" • "Watching the DVD, I noticed I wiggle back and forth a lot and that is kind of annoying!" • "I learned how important it is to have eye contact with students"
Appearance	• "I need better posture!" • "I should get more sleep before a presentation" • "I learned that wardrobe is important and the way that you present yourself has just as much influence on your content."
Affect	• "I would like to have better presence, more confidence and try to keep the class interested" • "As I watched myself I felt I could have projected more enthusiasm." • "I could have been a bit more upbeat—I was nervous."

Content Knowledge

As PTs reflected on their experiences in completing this assignment, over a third (17/48 or 35%) reported insights regarding the important role of content area expertise, as reflected in statements such as, "I want to understand the content more, I need to know the material very well," and "I realized how important it is for a teacher to know their stuff because you never know what kind of questions your students will ask."

PTs recognized that a lack of expertise had specific effects on aspects of their work on this assignment, such as requiring additional time for lesson preparation and adequate research and study. They found that lack of expertise also impacted the delivery of their lesson, in that it was sometimes difficult to find the right words to convey a concept or answer a question concisely. Finally PTs recognized the interface between content knowledge and classroom management; some reported difficulty feeling confident in leading class discussion due to lack of content knowledge (see Table 4). Reciprocally, a few PTs also acknowledged how a more in-depth understanding of their lesson topic would have been helpful in the selection of appropriate content and pedagogy for the lesson.

TABLE 4

SUB-CATEGORIES (WITH EXEMPLARS) OF RESPONSES RELATED TO CONTENT KNOWLEDGE

Category	PT Statement of Insight or Understanding
Relevance to lesson planning	"I learned that it is a lot harder preparing for a lesson if the content area isn't what I am used to."
Relevance to lesson delivery	"I learned that it is easier to be confident and experiment with teaching when one knows the material very well."
Relevance to classroom management	"The better you know your topic the less trouble you will have keeping a presentation going."

Classroom Management

Finally, a few (9/48 or 19%) PTs recognized that managing a classroom is a highly complex task; even when no misbehavior arises, the teacher must simultaneously manage content, time, and the needs of individual students. Some PTs reported that they enjoyed this challenge and felt ready to take on a classroom of their own, while others stated that more preparation would beneficial in this regard, "I have a long way to go to be able to direct a classroom" (see Table 5).

TABLE 5

SUB-CATEGORIES (WITH EXEMPLARS) OF RESPONSES RELATED TO CLASSROOM MANAGEMENT

Category	PT Statement of Insight or Understanding
Feeling Unprepared	• "I learned buckets of things about what I would change for future lessons. Time management was a very obvious area for improvement." • "I need to gain a lot of experience before I will be willing or ready to take charge of a classroom full of high schoolers. I need to learn how to make myself the authority person in the classroom without turning into a dictator."
Feeling Prepared	• "I learned that I love to control the classroom environment." • "I also learned that I enjoy being in front of the classroom and leading."

DISCUSSION

Previous research has found that PTs enter their teacher education coursework with a fairly firm set of ideas about what it means to teach (Lortie, 1975; 2002). Some of these viewpoints about the work of classroom teaching can be naïve or simplistic (Larabee, 2002). The presence of these pre-existing ideas about teaching can be problematic because they are often tacit in nature and it can be difficult for PTs to think critically about their unrecognized personal theories, constructs, and ideas (Lin, Gorrell, & Porter, 1999).

In order to help make tacit beliefs more explicit, pedagogical literature recommends engaging students in authentic learning situations in which they have opportunities to discover and examine their underlying values and beliefs (Nilson, 1998). These meaningful learning situations tend to revolve around direct practice which actively engages students in a relevant activity, has a degree of social interaction, is accompanied by a mild level of perceived risk, and is followed by written or verbal reflection (Standerfer, 2003). Authentic learning engages the student on a personal level, provides an avenue by which to encounter tacit assumptions, and provides concrete opportunities for students to make meaningful links between theory and practice.

This study set out to evaluate an innovative Educational Psychology course assignment designed to meet these criteria for meaningful learning, i.e., engagement, relevance, social interaction, and perceived risk. The Team Teaching assignment required each PT to be personally involved in planning, teaching, evaluating, and reflecting upon a real-world teaching experience. Data summarized in this report demonstrate the effectiveness of the Team Teaching assignment, when augmented by videotaping, in four areas.

The video-augmented Team Teaching assignment gave PTs the opportunity to encounter some of their tacit ideas about the teaching and learning process. Rather than simply having an outside source (such as an instructor, peer, or supervisor) call attention to and challenge their ideas, PTs in this study developed personal insight about their pedagogical decisions and presentation style from self-evaluation and reflection.

Second, the assignment gave PTs an opportunity to begin to personally connect theory and practice in a real classroom setting. This aspect of the assignment is particularly relevant to programs of teacher education that have limited or non-existent opportunities to provide PTs in Educational Psychology with structured field experiences in which to observe the theories of teaching and learning in action or try to put these theories into action themselves.

Third, being placed in a context in which to observe connections between theory and practice generated opportunities for PTs to engage in the process of professional reflection early in their education program. Given that critical thinking skills do not emerge by themselves, PTs need to participate in carefully scaffolded practice and

structured opportunities for reflection and critical thinking as early as possible, and the Team Teaching assignment provided the both the opportunity and guidance PTs needed to begin to develop these skills.

Finally, my intention for students who take this course is that they leave with a rich, grounded understanding about the complex nature of teaching and learning. I believe the Team Teaching assignment described in this study brought us closer to achieving this outcome because PTs were placed in real-world teaching circumstances and asked to examine and critique their knowledge, skills, and dispositions. Furthermore, when judged against the Interstate New Teacher Assessment and Support Consortium (INTASC, 1992) Standards for PT performance, this approach to instruction gave PTs the opportunity to strengthen and demonstrate their learning in several key areas identified in the Interstate New Teacher Assessment and Support Consortium (INTASC, 1992) Standards for PT performance: Content Pedagogy (Standard 1), Multiple Instructional Strategies (Standard 4) , Motivation and Management (Standard 5), Planning (Standard 7), and Reflective Practice (Standard 9).

While these results suggest that instructors can use this type of assignment to provide PTs with a challenging opportunity to develop personal insights and understandings about the nature of the teaching and learning process, three limitations in this study could influence future implementation and outcomes of this instructional innovation. First, a lack of baseline data from this group of PTs makes it difficult to determine the complete effect of this innovation. Thus, it is possible that outcomes of future implementations may differ in content and degree. Second, PTs submitted their written responses to the guided evaluation and reflection activity as part of their grade for the course. This aspect of the assignment was intentionally designed to only account for 5% of the PTs' final grade; but, nonetheless, it is possible that students' reported learning was inflated to secure a better grade. Finally, this innovation requires a significant time commitment on the part of the instructor to coach presentation groups, wire the classroom for sound, and film, download, edit, and burn video recordings to DVD. Although PTs reported meaningful insights from the experience, the time cost to the instructor who must deal with multiple, large sections may be prohibitive.

IMPLICATIONS FOR PRACTICE

The results of this study suggest that guided reflection in response to planning, delivering, and watching a digital video of one's own teaching can be a particularly useful tool in the process of PT growth and development. This may be in part because it can be easier to identify your own areas in need of growth, rather than have them pointed out by someone else; reflection and self-correction are potentially less threatening and more likely to produce change than when errors are identified by an outside source (McCurry, 2000). Thus, the discoveries and realizations generated from this Team Teaching experience have the potential to foster long-lasting development for PTs.

If educational psychology course content is separated from the real life of classrooms, PTs are not exposed to events and experiences in which theories can be legitimately examined, tested, and critiqued. Yet many institutions, like Montana State, are so situated that actual K-12 classroom placements are not available for PTs taking educational psychology courses, typically prior to entering methods courses or student teaching. Thus, an instructional innovation of this nature can help to close the gap between theory and practice by asking PTs to observe and evaluate theory in action.

An assignment similar to that used in this study can also provide the opportunity and impetus for PTs to begin the essential practice of reflection on teaching, in a somewhat less threatening and more structured environment than they will find in later student teaching experiences. Given that reflection is a pivotal component of learning to teach, this assignment can provide PTs with an initial taste of the growth and development possible through cultivating the discipline of professional reflection.

CONCLUSION

The findings from this study indicate the video-augmented Team Teaching assignment, yielded areas of new insight and understanding for PTs. Through their experiences of planning, teaching, evaluating, and reflecting, PTs reported growth and development in their ideas about lesson preparation and organization, delivery, content knowledge, pedagogical strategies, and classroom management.

These results support previous research which identified benefits of PTs' participation in formal classroom field experiences (Clift & Brady, 2005), service learning opportunities (Theriot, 2006) and

community-based field experiences (Burant & Kirby, 2002). Moreover, the findings from this study extend previous research by providing an exemplar of a course-based experience that serves to promote PTs' growth and development about the nature of teaching and learning, demonstrating that an instructional innovation within an Educational Psychology course centered around a guided experience of teaching and reflection can serve as a valid alternate "field experience" component for programs with limited access to K-12 classrooms.

Future research in this regard would benefit from investigating the effects of modifications made to the assignment. For instance, what would be the effect of having a graduate student hold a post-teaching conference with each team? Would modifying the guided evaluation and reflection task foster more sophisticated critical thinking and learning? For example, if the task included reflection prompts focused on learning related to INTASC standards such as Diversity (Standard 3) and Assessment (Standard 8), would that change the outcomes of PTs' reported insights. Finally, it would be worthwhile to examine the learning outcomes of a co-teaching experience (Roth & Tobin, 2002) in which PTs' join with the instructor to teach Educational Psychology course content together

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APPENDIX A

EDCI 209 – Educational Psychology and Adolescent Development
Team Teaching Self-Evaluation & Reflection

Structure

Properly Written Objectives	Explanation:
Lesson Sequence (organization & flow)	
Variety & Effectiveness of Instructional Strategies	
Active Participation by Students in the Class	

As you watch the DVD of your lesson, think about how *your* team performed in relation to the following pedagogical elements. Rate your team's performance on each item and give me some specific comments or examples to explain your rating.

Planning

Thorough Preparation	Explanation:
Equal Participation by All Members	

Content

Relevance of Material Presented	Explanation:
Depth of Material Presented	

Think about how *you* performed in relation to the following pedagogical elements. Rate your performance on each item and give me specific comments or examples to explain your rating.

Delivery

Vocal Expression & Clarity	Explanation:
Use of Gestures	
Eye Contact with Students	
Leading Discussion with Students	
Use of Good Questions for Students	
Enthusiasm & Professionalism	

Personal Reflection

What did you learn about **the process of teaching and yourself as a teacher** from completing this project?