

Creating Dissonance in Pre-Service Teachers' Field Experiences

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The study is practical in nature and addresses the call for investigating effective aspects of field experiences in teacher preparation. The authors designed a framework of assignments requiring the pre-service teachers to collect data about two diverse elementary students in their assigned elementary classroom during the twelve weeks of their placement. The pre-service teachers experienced cognitive dissonance as some of their preconceived notions about students and teaching conflicted with their field study experiences. The findings indicate that the pre-service teachers experienced cognitive dissonance between their beliefs and field experiences resulting in justified true beliefs about the relationship between knowledge of students and effective instruction, assumptions about students who were unlike them, and implications for future teaching.

Pre-service teachers enter teacher preparation programs with preconceived notions about what it means to be a teacher and notions about students' abilities. While some preconceived notions are accurate (e.g., potential to positively impact society and make a lasting difference in a child's life), many of them are simple myths about the teaching profession that are not debunked until one has spent extended time employed as a full-time teacher. Of greater importance, classrooms have become more diverse and many pre-service teachers are unprepared to address the needs of diverse learners. Teacher preparation programs can significantly provide their graduates with greater readiness skills by creating structured field experiences that immerse pre-service teachers in the realities of classroom teaching that systematically confront their beliefs about diverse students. The confrontation of their beliefs and their experiences in classrooms creates a cognitive dissonance that enables pre-service teachers to

negotiate the conflict between these preconceived notions and the realities of classroom teaching.

The value of structured and systematic field experience throughout the teacher preparation program has been found to be one of three most critical aspects of effective teacher preparation (National Research Council, 2010) and recommended as essential to the reform and improvement in teacher preparation (National Council for Accreditation of Teacher Education, (NCATE) 2010). While additional time spent in classrooms, similar to those they will teach in the future, provides pre-service teachers with greater opportunities to develop the knowledge and skill needed, the characteristics of effective clinical experience is poorly defined. The National Research Council (NRC) (2010) found "there is no systematic causal evidence on what aspects of field experiences have the greatest effect on teacher effectiveness" (p. 181). Both NRC and NCATE identify the need for additional research to identify the effec-

tive aspects of field experiences that contribute to teacher effectiveness.

This study seeks to shed some light on what contributes to effective practices in clinical experiences. The purpose of this study was to investigate the impact of assigned case studies during a structured twelve-week field experience on pre-service teachers' efficacy and their attitudes towards diverse students. The pre-service teachers focused on developing greater knowledge of two elementary-age students identified with learning needs and/or socio-cultural background unlike those of the pre-service teacher.

Literature Review

Beliefs, Knowledge, and Justified True Beliefs

Many who enter the teaching profession attempt to create a classroom environment that is a response to their own personal educational experiences. For example, if a pre-service teacher remembers learning primarily through lecture and reading, he or she may not believe, despite having acquired the knowledge from university course work to the contrary, that teaching through multiple intelligences is important. The preconceived notion the pre-service teacher has about multiple intelligences theory is based on what she/he perceives her/his teachers to have done that was successful. Without the actual experience of creating, implementing, and assessing an instructional unit based on multiple intelligences theory, the pre-service teacher cannot be fully versed in the benefits of this teaching theory. Until the actual experience occurs, gaps exist among a pre-service teacher's educational belief structure, knowledge base, and ability to teach.

Beliefs. A belief is a preconceived notion that is not grounded in professional teaching experience. Pre-service teachers' beliefs "tend to be eclectic aggregations of cause-effect propositions from many sources, rules of thumb, generalizations drawn from personal experience, beliefs,

values, biases, and prejudices" (Clark, 1988, p. 5). It follows that many of these beliefs mirror the experiences pre-service teachers had when they were students in K-12 school settings.

Knowledge. Knowledge refers to a notion that has been explicitly or implicitly taught by one person to another person. This definition excludes the real-world experiences of the learner. As such, pre-service teachers who have heard and read about multiple intelligences, but have neither observed it in practice nor implemented it in a classroom setting, have only knowledge of multiple intelligences. While much class time is spent investing in pre-service teachers' pedagogical knowledge, this knowledge is likely to be overridden by beliefs (Desjean-Perrotta, Moseley, & Cantu, 2008; Gettier, 1963; Nespor, 1987). Basically, personal experience trumps book knowledge. Thus, when faced with a situation in which an individual's beliefs and knowledge conflict, the individual is likely to revert to personal beliefs rather than knowledge to guide his/her behavior.

Justified true beliefs. More important than beliefs and knowledge is what epistemologists term a 'justified true belief' (Desjean-Perrotta, Moseley & Cantu, 2008). According to Gettier (1963), a justified true belief occurs when three conditions are met: (1) a condition is true, (2) a person believes the condition to be true, and (3) that person is justified in believing that the condition is true. Only after all three conditions have been met has a person achieved a justified true belief. Extending the example from above, pre-service teachers may not initially believe that multiple intelligences theory is important. After being presented with evidence that demonstrates the theory's effectiveness, a pre-service teacher may know this theory's foundations and importance but still not actually believe it. When pre-service teachers gain personal experience with the effectiveness of multiple intelligences theory, they encounter cognitive dissonance. The cognitive dissonance is a conflict between their initial belief and the belief resulting from their experiences with multiple

intelligences. They will internalize these concepts and produce a justified true belief about effectiveness of this pedagogical approach. Therefore, giving pre-service teachers the arena to experience dissonance between their beliefs and experiences will facilitate new justified true beliefs and help them internalize and use it as a guide for future instructional practices.

Pre-service teachers' beliefs about social and emotional needs. Teacher qualities such as intelligent, organized, open-minded, and patient are important; they are considered secondary when compared to caring and empathy (Cabaroğlu & Roberts, 2000; Goldstein & Lake, 2000; McAllister & Irvine, 2002). Teachers who are able to first connect with students on a personal level are more likely to create a learning environment that allows students to feel safe, take risks, and meet desired educational objectives (Causey, Thomas, & Armento, 1999; Goldstein & Lake). To facilitate this development, pre-service teachers must be given sustained opportunities to work closely with diverse students, reflect on those experiences, and come to the realization that all students have social-emotional needs that influence learning.

Goldstein and Lake (2000) found that pre-service teachers' reflections revealed "several important and commonly held aspects of... understandings of caring: essentialism, oversimplification, and idealism" (p. 865). The findings in this study revealed that "...teaching, a profoundly complex endeavor, was often reduced by the students to mirror the flat representation of typical teachers found in television commercials, greeting cards, magazine advertisements, and in movies" (p. 867). This over-simplification illustrates that pre-service teachers have knowledge about the importance of caring but have yet to internalize or actualize professional caring as a teacher. It can be argued that the gap that exists among pre-service teachers' beliefs, knowledge, and justified true beliefs can be lessened through experiences of cognitive dissonance.

Pre-service teachers' beliefs about academic skills. Pre-service teachers have little knowledge of student academic skills mainly because they lack significant experience in working with students in up-close and personal settings (Athanasas & Achinstein, 2003). A study by Rinn and Nelson (2009) found that pre-service teachers do a better job of identifying a student's weaknesses than strengths. This study suggests that university teacher preparation programs provide more significant opportunities for pre-service teachers to work with a diversity of students in up-close and personal settings. The combination of personal experiences and theory should be designed in such a way that challenge and redefine pre-service teachers' belief systems and lead to justified true beliefs.

Clinical Practices to Impact Pre-service Teacher Effectiveness

Pre-service teachers hold notions about how students learn based on their own experiences as a learner. Their experiences as a learner can prove an effective starting point for extending their perspectives beyond their own experiences. "Programs that successfully changes beginning teachers' understanding about teaching and learning use their students' initial beliefs about teaching as a springboard for surfacing and confronting misconceptions" (Darling-Hammond & Baratz-Snowden, 2007, p. 117). Guided observations are an effective means for pre-service teachers to identify, confront, and challenge their preconceived notions about students and teaching.

Another way to confront notions that many pre-service teachers bring with them and extend their learner-centered perspective is to provide significant opportunities for them to work with a diversity of students in up-close and personal settings. Athanasas and Martin (2006) studied the effects of educational equity advocacy in teacher preparation. The pre-service teachers found they were better able to achieve educational equity as a result of spending "a whole day with students,

getting inside their heads” (pp. 633-634). Graduates reported that this experience helped them place individual student learning at the center of their teaching.

Current Study

Two researchers, who taught the science and mathematics methods courses and supervised the practicum course, believed that pre-service teachers were not effectively merging their preconceived beliefs about students’ and their learning needs with their theoretical content knowledge. We found that many of the pre-service teachers were still making generalizations about students without considering students’ individual, developmental characteristics even at the end of the semester. It was not uncommon to hear the pre-service teachers referring to students as a collective (e.g., “The students don’t like math) or statements about students reflective of preconceived notions (e.g., “She is not very smart because she never talks in class”). We designed a framework of case study assignments to create authentic learning with diverse students and create dissonance between pre-service teachers’ beliefs and experiences. As researchers we had the following questions:

1. What impact does a field experience, structured with developing two student case studies, have on pre-service teachers’ beliefs about students?
2. What, if any, impact does creating dissonance have on their beliefs about teaching?
3. How will pre-service teachers guide future practice through their new-found justified true beliefs?

Method

Participants

This qualitative study involved 58 pre-service elementary teachers: fifty-six Caucasian females, one African American female, and one Caucasian male. The mean age was 23 and three students were second-career students. More than three-fourths (48) of the participants were raised within a 20-mile radius from the university in predominantly Caucasian communities. More than 90% (53) were employed and financially responsible for their tuition. Each participant completed a minimum of 100 hours in an assigned elementary classroom during the study. The elementary classrooms were located in urban, suburban, and rural schools with a mix of homogeneous and heterogeneous student populations.

Design and Procedure

The pre-service teachers’ cooperating classroom teachers identified two “struggling” or “challenging” students with learning and social-emotional needs that differed from the pre-service teachers’. The framework of assignments was designed to engage pre-service teachers in collecting and analyzing data about each identified student and creating a portrait of each student. The assignment topics included, but were not limited to, understanding how students learn, developmental progress, and the influence of school, home and community contexts (Appendix). Each week the pre-service teachers focused on a particular topic and collected data about their two students through interviews, observations, and diagnostic assessments. We designed the assignment to engage participants in responding to questions of compelling interest through data collection, written reflection, class discussion with peers, consultation with cooperating teachers, and dialogue with university supervisor. They recorded their data and wrote reflections related to their observations, insights, and questions in a journal. The pri-

mary data source was the participants' reflective journals.

Data Analysis

This is a qualitative study using the methodological approach of grounded theory as described by Strauss and Corbin (1998). Grounded theory involves the identification of reduction of qualitative data through the use of pertinent codes and categories that emerge from the data. The process of data analysis was recursive and the purpose of the data analysis was to identify what impact the assignment had on the pre-service teachers' development of justified true beliefs and implications for future practice. To build grounded theory, we analyzed and reduced the data to include only the data focused on the pre-service teachers' emerging justified beliefs about students, teaching and the relationship between the two. The researchers applied multiple codes as a progressive process of sorting and defining to identify major themes. Categories were revised and refined through a constant comparative process. The researchers used frequency patterns to identify the most significant aspects of impact on the pre-service teachers' justified beliefs. The research team conducted both individual and collective coding sessions throughout the analysis process to increase the study's reliability and validity. The results of this study represent the codes, categories and dimensions that emerged from the data.

Results

Dissonance between beliefs and experiences began to occur with the first assignment. Pre-service teachers noted conflicts between their beliefs and their experiences with the two diverse students in their first entry and continued throughout the semester. These insights have been categorized as Importance of Knowing Students, Students have Social and Emotional Needs that Impact Learning, The Importance of Building Relationships, and The Role of Observation and Anecdotal Records. In each area pre-service teachers

indicated the challenges of operating from a new set of beliefs to meet the needs of their learners.

Importance of Knowing Students

Pre-service teachers developed knowledge of the two diverse students and began to "see" the students' perspective. "When you get to know the personalities and how a child learns and operates, it is then much easier to teach them academics. Knowing your students allows you to see through a window of their perspective and then teach them accordingly." The pre-service teachers articulated that the action of developing knowledge of individual students both informed and advanced learning. "It is obvious that I will never know every detail about every student that comes into my classroom, but taking the time to get to know them as individuals instead of just a class of students will give me insights on how each child learns."

Attending to the uniqueness of individual students. The interaction between the pre-service teacher and the diverse students created the justified true belief that a teacher must have specific knowledge of individual students to make these accommodations for most pre-service teachers. They found they were able to see different ways students learned, different academic levels, and how students interpreted things differently. "Both of the students I worked with were unique and needed a different approach to best help them develop. In the future I will maintain this understanding that each student is an individual and will work to instruct in a way that aids in the learning process for all students." They placed a value on identifying the unique qualities in each of their future students and finding the strategies to meet their students' needs.

Similarities of students. The pre-service teachers saw both the uniqueness and similarities of students the students as individuals and see how students were similar. The most commonly identified similarity the pre-service teachers found

is that the “students were eager to have a teacher take a personal interest in them” and that “all students were interested in learning.” One participant reflected this shift, “On paper and by demographics these two students are completely different, but they really are the same. They both want to learn and most of all they both want someone to pay attention and love them. They need a real connection with an adult they can look up to.”

Students Have Social and Emotional Needs that Impact Learning

A significant aspect of the pre-service teachers’ learning was in understanding the critical role of social and emotional needs on the child’s capacity to learn. “I guess I was previously naïve—or just merely uniformed—about the needs of elementary students, especially since I could only go by my experiences in school.” In many ways the pre-service teachers had not yet developed an integrated understanding of the various factors that contribute to a person’s ability to learn. As one participant expressed, “So many students have personal needs that affect the way they learn. They have other things on their mind that can keep them from paying attention in class or from wanting to learn.” Learning about the experiences that their students have before and after school, helped the pre-service teachers to realize that often students bring issues from home to school and these issues contribute to the students’ learning. “I am now more sensitive to the home lives, experiences and goals of these young people. I will always remember that there is more to a life of a child than what goes on at school—and even school days can present challenges to these students - in them personally and in their education.” In getting to know two students very personally, the pre-service teachers were able to better understand their student’s behavior, learning challenges, and motivations. The following is representative of what many pre-service teachers came to believe. “If a student walks in the room feeling upset because he or she lacks confidence in their ability to succeed, that student will struggle in

learning the material for the day...if we can identify these needs we can help the student gain the confidence needed to be a successful learner.”

Importance of Building Positive Relationships

Evidence of the pre-service teacher realizing the value and impact of providing individual attention, positive encouragement, and building relationships was found in every teacher’s reflections. The pre-service teachers experienced how building relationships with children became the tool through which their social-emotional needs were identified, learning strategies identified, and student motivation increased. “I truly think I made an impact on those students in many ways. Just noticing new things about them, asking them about their day and encouraging them to give their best seemed to make a difference in their day.”

The pre-service teachers were surprised by how great the impact was of such small behaviors as taking a personal interest and how it influenced the students’ confidence and learning. “Bobby opened up to me and would always want to make sure I was coming back to see him. I believe if he can make that connection with others, he will begin to gain the self-confidence which will help him do well.” Other pre-service teachers identified the impact of their relationship with a challenging child and how that relationship helped both the child and the pre-service teacher. The pre-service teachers developed justified true beliefs based on their knowledge and experience with diverse students and were better able to meet the students’ needs. The pre-service teachers believed that their focus on these accommodations resulted in an increase in student motivation and academic growth.

Role of Observations and Anecdotal Records

The pre-service teachers found great value in observing individual students and reported that the observation and recording of student actions

and interactions provided great insights about individual students. The pre-service teachers reported that they designed their lessons based on what they had observed about individual students, making the connection between the students' learning styles and instructional delivery. Pre-service teachers reported that the knowledge gained by assessing and documenting students' development was instrumental to making effective instructional decisions. "Taking anecdotal records on learning progress is an essential task for any teacher." The assignment challenged the pre-service teachers to experience and justify the value of observing students and recording anecdotal notes.

Discussion, Implication, and Limitations

The pre-service teachers acquired a perspective of their students that transcended their preconceived notions. The pre-service teachers developed both knowledge of these diverse learners and a very positive interpersonal relationship. The impact of the dissonance between their prior beliefs and experiences broadened their understanding of the range of students' needs and how these influence learning.

Pre-service teachers realized that getting to know the personalities of the individual children and observing how they learned in various contexts enabled them to be a more effective teacher. It provided them the opportunity to view the students through the perspective of that child and this understanding informed their interactions with the student. Prior to this assignment, the pre-service teachers had beliefs and a theoretical knowledge about the importance of knowing students but lacked the up-close and personal experience and the dissonance between their beliefs and experiences to form justified true beliefs. The assignment challenged them to identify their beliefs, posit these beliefs in their developing knowledge of the two students, and within the broader context of their vision of teaching to develop justified true beliefs about teaching.

Pre-service teachers found that leveraging information about students and translating this knowledge into instructional practice resulted in successful learning for the students. The findings of the study indicate that the framework of assignments had a significant impact on the pre-service teachers' knowledge of the relationship between knowledge of diverse students and effective instruction, overcoming assumptions about students who were unlike them, and implications for their future teaching. Cognitive dissonance played the role of challenging the pre-service teachers' preconceived notions about student perspectives and opportunities for learning. The structured field experience provided the pre-service teachers with the actual experiences to justify their knowledge of the importance of the relationship between knowledge of diverse students and effective instruction. In effect, it reduced the gap of knowledge, beliefs, and practices.

Pre-service teachers need early structured field experiences that create both dissonance between and connections to prior beliefs, understandings and current clinical experiences to better meet the needs of their students in the future. One way to do that is with up-close and personal experiences with students in their field placements. Student centered instruction springs from this personally justified knowledge. Constructing personally justified knowledge and beliefs gives pre-service teachers a more realistic platform for effective practice.

While the results of this pilot study were encouraging, there are limitations that must be noted. First, this is a qualitative study and cannot be generalized without further study to validate the findings. Future studies may benefit from a pre-and post-survey to measure pre-service teachers' initial beliefs about teaching, diverse students' learning capabilities, and the value of knowing students as individuals.

References

- Athanases, S. Z., & Achinstein, B. (2003). Focusing new teachers on individual and low performing students: The centrality of formative assessment in the mentor's repertoire of practice. *Teachers College Record*, 105(8), 1486-1520.
- Athanases, S. Z., & Martin, K. J. (2006). Learning to advocate for educational equity in a teacher credential program. *Teaching and Teacher Education*, 22, 627-646.
- Cabaroglu, N., & Roberts, J. (2000). Development in student teachers' pre-existing beliefs during a 1-year PGCE programme. *System*, 28(2000), 387-402.
- Causey, V. E., Thomas, C. D., & Armento, B. J. (1999). Cultural diversity is basically a foreign term to me: The challenges of diversity for pre-service teacher education. *Teaching and Teacher Education*, 16(1), 33-45.
- Clark, C. M. (1988). Asking the right questions about teacher preparation: Contributions of research on teaching thinking. *Educational Researcher*, 17(2), 5-12.
- Darling-Hammond, L., & Baratz-Snowden, J. (Eds.). (2007, Winter). A good teacher in every classroom: Preparing the highly qualified teachers our children deserve. *Educational Horizons*, pp. 111-132.
- Desjean-Perrotta, B., Moseley, C., & Cantu, L. E. (2008). Preservice teachers' perceptions of the environment: Does ethnicity or dominant resident experience matter? *Journal of Environmental Education*, 39(2), 23-31.
- Gettier, E. L. (1963). Is justified true belief knowledge? *Analysis*, 23(6), 121-123.
- Goldstein, L. S., & Lake, V. E. (2000). "Love, love, and more love for children:" Exploring pre-service teachers' understandings of caring. *Teacher and Teacher Education* 16(2000), 861-872.
- McAllister, G., & Irvine, J. J. (2002). The role of empathy in teaching culturally diverse students: A qualitative study of teachers' beliefs. *Journal of Teacher Education*, 53(5), 433-444.
- National Council for Accreditation of Teacher Education. (2010). Report of the blue ribbon panel on clinical preparation and partnerships for improved student learning. Retrieved from <http://www.ncate.org/LinkClick.aspx?fileticket=zzeiB1OoqPk%3d&tabid=715>.
- National Research Council (2010). Preparing teachers: Building evidence for sound policy. Retrieved from http://www.nap.edu/catalog.php?record_id=12882.
- Nespor, J. (1987). The role of beliefs in the practice of teaching. *Journal of Curriculum Studies*, 19, 317-328.
- Rinn, A. N., & Nelson, J. M. (2009). Preservice teachers' perceptions of behaviors characteristic of ADHD and giftedness. *Roeper Review*, 31(1), 18-26.
- Strauss, A., & Corbin, J. 1998. Basics of qualitative research: Techniques and procedures for developing grounded theory (2nd ed.), Thousand Oaks, CA: Sage Publications.

Appendix

Practicum Assignments

Using the graphic organizer template provided, collect information about the diverse needs of your students. This information will help you when designing your lessons throughout the semester, as you make plans to accommodate needs. Do not feel limited by the space provided in the templates; adjust page length as necessary, to answer the questions thoroughly, recording any information that will help you make lesson plans to meet the needs of all your students.

Demographics		
# Students enrolled	Grade level(s) in class	Ages in class (list all that apply)
School and district factors: public school information should include Comprehensive School Improvement Plan (CSIP), School Report Card (CATS/CTBS results), and relevant data about achievement gap groups. Non-public schools should include similar data.		
Place a \checkmark beside the phrase that best describes the classroom setting. <input type="checkbox"/> self-contained <input type="checkbox"/> lab <input type="checkbox"/> field <input type="checkbox"/> collaborative classroom		
Describe the resources (equipment, technology, and supplies) available to you for this class.		
Place a \checkmark beside the phrase that describes the types of help available to you. <input type="checkbox"/> instructional assistant(s) <input type="checkbox"/> parent volunteers <input type="checkbox"/> peer (student) tutors <input type="checkbox"/> resource teachers <input type="checkbox"/> classroom teacher <input type="checkbox"/> other (Please specify)		
Indicate the # of students in each category below. _____ ESL _____ # with IEPs _____ # with 504 modifications _____ Title I _____ Gifted _____ Other		
List types of differences in this box _____ Languages _____ Cultures _____ Achievement/Developmental Levels		
Indicate the # of students for each pattern of achievement. _____ Below grade level _____ At grade level _____ Above grade level		
Describe other classroom conditions (if any) including student demographics that have implications for teaching and what might be observed in your classroom.		
Implications for instruction: List two or three ways the above factors influence planning and implementing instruction.		

Practicum Assignments cont.

Write a new Teaching and Learning Context description describing your practicum placement from Professional Semester II. It is important that you have an introduction and conclusion to this narrative. You should attempt to address as many of the following criteria as possible:

- School and district factors: description of the district (rural, urban, middle class, etc.), diversity, percentage on free/reduced lunch, school report card data, relevant data about achievement gap groups.
- Classroom factors: physical features of the classrooms, availability of technology, extent of parental involvement in the classroom, grouping patterns, scheduling.
- Student Characteristics: ages, gender breakdown, race/ethnicity, special needs, developmental levels, gap group representations, learning styles, students' skills and prior learning.
- Implications for Instruction: describe two or three ways the above factors impact planning and implementing instruction.
- Classroom Management: in light of your contextual description, describe your expectations for classroom discipline and behavior management, classroom rules, and other processes you observed that promote a classroom environment conducive to student learning.
- In light of your observations and the data presented above, describe what you have learned that will impact your practice as a new teacher.

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