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What do they believe now? A Cross-Sectional Longitudinal Follow-Up Study of Teachers’ Personal Practical Theories (PPTs)

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What do they believe now?

A cross-sectional longitudinal follow-up study of teachers’ beliefs in action

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Abstract

This study was designed to help us better understand the current pedagogical beliefs of teachers who earned an elementary grades teaching license from our post-baccalaureate teacher education program between 2004-2009. We were especially interested in whether the pedagogical beliefs of these teachers, which they expressed as their personal practical theories (PPTs), had changed over time. If there were changes, we were also interested in how and why their beliefs had changed, and factors that enabled and/or constrained them from enacting their beliefs in their classrooms. Findings from interviews and classroom observations are reported in this paper for a convenience sample of 18 teachers, giving us a cross-sectional, longitudinal look at the pedagogical beliefs of teachers with 1-6 years of experience. Implications for teacher educators interested in better understanding how teachers’ beliefs change over time and what influences those changes are discussed.

Studying teachers’ beliefs and actions is important for teacher educators who want to better understand the role beliefs play in what and how preservice teachers learn during their teacher education program. Additionally, studying how teachers’ beliefs change over time may help teacher educators determine ways to support both prospective and experienced teachers as they try to enact what they believe is important to them as teachers, thus supporting their developing identity and sense of agency as professional educators (Beijaard, 1995; Beijaard, Meijer, & Verloop, 2004; Beijaard, Verloop, & Vermunt, 2000; Fairbanks et al, 2010; Hammerness et al., 2005). Further, such research may even help us discover ways to help teachers stay in the field of teaching longer.

Both research and experience tell us that prior beliefs serve as a filter to what preservice teachers learn during their teacher education program and that teacher education may be a “weak” intervention because of strongly held beliefs (Fairbanks et al., 2010; Kagan, 1992; Lortie, 1975; Richardson, 1996, 2003; Zeichner & Liston, 1987). Previous research also tells us that teachers’ beliefs influence their actions in the classroom (Chant, Heafner, & Bennett, 2004; Olfson & Schraw, 2006; Pajares, 1992; Richardson, 1996, 2003); therefore, as teacher educators, we are also interested in learning if what is learned during teacher education actually “washes out” when program graduates enter the field as some researchers believe (c.f., Lortie, 1975; Veenman, 1984; Zeichner & Liston, 1987), or if teacher education continues to influence teachers’ beliefs and practices.

Our previous research about preservice teachers’ pedagogical beliefs described the content and sources of beliefs from 93 preservice teachers (Levin & He, 2008). In that study, we elicited our preservice teachers’ beliefs prior to student teaching in the form of their personal practical theories (PPTs) using the personal
theorizing processes described by Cornett (1990) and used by others in their research (Chant, 2002; Chant et al., 2004; Cornett, Yeotis, & Terwilliger, 1990; Ross, Cornett, & McCutcheon, 1992). As a result of our initial study of preservice teachers’ beliefs (Levin & He, 2008) we developed a model of the relationship between the content and sources of teacher candidates’ beliefs, teachers’ performance in the classroom, and students’ opportunities to learn (Levin & He, 2008). This empirically-based, but still theoretical, model connects teachers’ pedagogical beliefs to their actions in the classroom, but we had not yet studied if or how preservice teachers’ beliefs would be enacted in their practice once they entered the field as fulltime teachers. Building on our previous work, this study takes a cross-sectional, longitudinal approach to help us understand the current pedagogical beliefs of a convenience sample of 18 graduates from our teacher education program who are now elementary school teachers with 1-6 years of fulltime teaching experience. In this study our main interest is in learning whether their pedagogical beliefs change over time, and if they have, how and why their beliefs change. By interviewing and observing these now experienced teachers, we sought to identify: (a) the content and sources of their current pedagogical beliefs; (b) their perceptions about what influenced any changes in their beliefs since graduating from our teacher education program, and (c) factors they perceive that enable and/or constrain them from enacting their pedagogical beliefs in their classrooms. In addition, we sought to determine if we could see their beliefs in action through classroom observations.

**Conceptual Framework**

The conceptual framework we used to guide this study includes (a) the use of personal practical theories and the personal theorizing process as a way to elicit teachers’ beliefs (Chant, 2002; Cornett, 1990); (b) past research
on the nature of the content and sources of teacher beliefs (e.g., Connelly & Clandinin, 1985; Elbaz, 1981, 1983; He & Levin, 2008; Nespor, 1997; Levin & He, 2008; Pajares, 1992, 1993; Richardson, 1996, 2003); and (c) more recent scholarship about teachers’ professional identity development and sense of agency (e.g., Fairbanks et al. 2010; Beijaard, 1995; Beijaard et al., 2004; Beijaard et al., 2000), including how these issues might influence teachers to stay or leave teaching.

Cornett (1990) defined personal practical theories (PPTs) as the systematic set of beliefs (personal theories) which guide teachers’ classroom practices based on their prior life experiences (personal practices), derived from non-teaching activities, and also from experiences that occur as a result of designing and implementing the curriculum through instruction (practice). As a proxy for teachers’ beliefs, PPTs are elicited through a reflective process that Cornett and his colleagues call personal theorizing (Chant, 2002; Chant et al., 2004; Cornett, 1990; Cornett et al., 1990; Ross et al., 1992). Our previous research on the content and sources of the beliefs of preservice teachers (Levin & He, 2008), and on comparing preservice teacher beliefs with those of their cooperating teachers and their teacher educators (He & Levin, 2008) elicited participants’ beliefs in the form of their PPTs through writing and interviews. The results of these studies yielded mainly pedagogical beliefs about (1) who teachers are including how they view their roles and responsibilities, (2) what they do with regard to their beliefs about instructional strategies and assessment, (3) where they teach with regard to what they believe classrooms should be like, and (4) their beliefs about the students whom they teach.
It has been many years since Pajares (1992, 1993) and others (e.g., Connelly & Clandinin, 1985; Elbaz, 1981, 1983; Nespor, 1997) argued that teachers’ beliefs should become an important focus of educational inquiry. Since then Richardson (1996, 2003) provided additional research about teachers’ beliefs, showing us that prospective teachers’ prior beliefs influence what is learned during their teacher education program by acting as a filter through which teacher candidates acquire and interpret new knowledge. Further, recognizing that teacher candidates bring into teacher education their prior understanding of teaching based on their K-12 learning experiences, some researchers found that teacher beliefs are resistant to change even with interventions (Wideen, Mayer-Smith & Moon, 1998), while others reported that teachers’ beliefs develop and change as they gain more teaching experiences (Chant et al., 2004; Fives & Buehl, 2008), and that teachers expect such change regarding their understanding of teaching (Buehl & Fives, 2009).

As most researchers recognize, it is hard to make a clear distinction between beliefs and knowledge (Fairbanks et al., 2010; Pajares, 1992). While some think that beliefs are part of knowledge (e.g., Nisbett & Ross, 1980), others believe that knowledge is part of our belief system (e.g., Rokeach, 1968). Even though opinions diverge about the definition of beliefs and knowledge, most researchers agree that it is critical for teachers to reflect on what they perceive as important for their teaching practice (Buehl & Fives, 2009; Kennedy, 2007), including reflection on their visions and beliefs and how these might influence their identity, which we and others believe might help them to cope with some of the pressures they face in teaching today (e.g., Clandinin, Downey & Huber, 2009; Fairbanks, et al, 2010).

Most studies on the development of teachers’ beliefs are based on single case studies (Elbaz, 1981; Chant, 2009; Fry, 2009) or desired changes expressed by
one particular group of participants (Fives & Buehl, 2008). Alger’s study (2009) of
teacher metaphors, another way to elicit what teachers believe about teaching, is
one of the few that attempted to examine trends in teacher belief change and
development over time. Based on a survey of 110 secondary teachers with different
levels of teaching experiences, Alger reported that 63% of the teachers changed
their metaphors for teaching over their career span. Alger also found that with more
teaching experiences, teachers tend to agree that teaching is guiding, which is a
more teacher-centered metaphor, as opposed to teaching as engaging in the
community, which is a more student-centered metaphor. In this study, Alger
suggested that the major force for changes in their metaphors is teachers’
experiences in the field and the obstacles they experience, including those related
to students, curriculum, home and community, and administration.

Other researchers have studied preservice and inservice teachers’ epistemic
beliefs about knowledge for teaching (Buehl & Fives, 2009; Fives & Buehl, 2008),
general epistemological beliefs and world views of practicing teachers (Olafson &
Schraw, 2006; Schraw & Olafson, 2002), and beliefs about teaching in particular
domains such as science and math (Hofer & Pintrich, 1997, 2002) and in reading
(Cunningham & Fitzgerald, 1996) among other domains. However, a potential
limitation of some of these studies is their use of surveys, which we believe don’t
always convey the nuances and reasons for teachers’ beliefs that may be elicited
through the personal theorizing process or through interviews and observations.
However, such studies do tell us that teachers’ beliefs are complex, seem to be
influenced by whether teachers view knowledge as fixed or changeable, that beliefs
may be different with regard to different knowledge domains, are likely influenced
by uncertainty, and also by external constraints. While recent studies of teachers’
epistemic beliefs used open-ended survey questions (Buehl & Fives, 2009; Fives & Buehl, 2008) to gather beliefs, or inferred teachers’ epistemic beliefs and world views from their responses to various surveys, vignettes, and teacher-produced slide shows (Olafson & Schraw, 2006; Schraw & Olafson, 2002), we selected to use face-to-face interviews followed by classroom observations during this study.

Other related scholarship about teachers’ professional identity development (e.g., Beijaard, 1995; Beijaard et al., 2004; Beijaard et al., 2000; Fairbanks, et al, 2010) reminds us that teachers’ beliefs are influenced by social, cultural, political and historical contexts. In order to capture the ever-changing, agentic, positional and socially constructed nature of teacher development and draw implications to help us better prepare teacher candidates for “changing landscapes” (Clandinin et al., 2009), we also include this broader framework to help us better understand that personal, professional, and political factors may impact if and how teachers are able to enact their PPTs in their classrooms.

**Background for this Study**

Prior to student teaching, all participants in this study identified and described their personal practical theories (PPTs) in writing using the personal theorizing process (Chant, 2002; Cornett, 1990). As part of a required assignment at the beginning of the semester before student teaching, they also described how they imagined each of their PPTs would play out in practice. Later in the same semester they were asked to provide evidence of whether or not they actually enacted their PPTs in either the preactive stage of teaching (such as during goal setting or planning lessons), or the active stage (such as might be evidenced in written observations by supervisors or peers), or in the post-active stage (such as in
their many required reflections). The second part of the personal theorizing process included data gathering and self-analysis that asked these preservice teachers to evaluate whether or not they felt they had good evidence of enacting their PPTs at that point in their teacher education program (prior to student teaching but with two semesters of 10-hour per week internships under their belt), why this may or may not be the case, and if they wanted to revise, add, or delete any of their PPTs. The third phase of the personal theorizing process required these preservice teachers to plan an action research study on one of their PPTs, perhaps a PPT for which they did not have good evidence of enacting but still believed in strongly, or a PPT they really wanted to learn more about.

The content of their original PPTs included mainly pedagogical beliefs about teaching, learning, children, schooling, curriculum, and their roles as teachers (Levin & He, 2008), and also included self-reported sources for these beliefs. The sources of the beliefs they named came in about equal proportions from their family background and experiences growing up as students in K-12 classrooms, or their observations and teaching experiences required during their teacher education program, or from readings, theories, and professors in their teacher education program (Levin & He, 2008). A limitation of our initial study of teacher beliefs was that PPTs were elicited prior to student teaching and that not all of these preservice teachers were able to carry out their planned action research project. Therefore, in this study we sought to conduct follow-up interviews of our program graduates to elicit their current PPTs, followed by day-long classroom observations in some of their classrooms, and additional interviews after the observations to see if we could determine if the participants’ current PPTs are reflected in their practice.

Methods
This cross-sectional, longitudinal study was designed to help us better understand the current pedagogical beliefs of elementary teachers with different years of experience, and how and why those beliefs changed over time. By interviewing and observing teachers who graduated from a cohort-based, Masters-level teacher education program between 2004-2009, we sought to identify: (a) the content and sources of our teacher participants’ current pedagogical beliefs elicited in the form of their PPTs, (b) their perceptions about changes in their PPTs over time, and (c) factors they perceive that enabled and/or constrained our teacher participants from enacting their PPTs. Four research questions guided data collection and analysis during this study:

1. How do participants describe the content and sources of their current PPTs?

2. How are the participants’ PPTs similar or different from when they were preservice teachers? How are participants’ PPTs similar or different across different cohort groups?

3. What do participants perceive as supports or constraints for enacting their PPTs?

4. In what ways do participants enact their PPTs in the classroom?

Volunteers for this study were solicited based on our personal knowledge of how to contact some of our program graduates (about 20 each year), as well as contacts made using a popular social networking site, and referrals from other graduates. Due to factors such as our graduates leaving the classroom for a variety of reasons related to family circumstances, lateral moves out of the classroom, never teaching, marrying and changing their name, teaching out of state, or just not
wanting to participate, we struggled to get a decent size sample for this study. We were finally able to get 18 volunteers, three who had graduated each year between 2004-2009, who were still teaching in our region and who were willing to be interviewed and observed. Six of these teachers who were teaching in nearby schools, one from each year between 2004-2009, were then selected to be observed for a day in their classrooms by two researchers. Their selection was strictly one of access and convenience because we had IRB permission to work in their school systems.

Data sources for this study included participant interviews to elicit their current PPTs (see Appendix A for interview protocol). Additionally, full-day classroom observations were conducted with six participants, one from each cohort group. Immediately following classroom observations a second interview was conducted. Each of the researchers conducted six initial interviews and two researchers completed the observations together on the same day. The initial interview questions focused on three major aspects: (1) teachers’ current PPTs and the sources of their PPTs; (2) differences in current and original PPTs and potential barriers and constraints to enacting their PPTs; and (3) future career goals and plans. These interviews were conducted either in person, or by phone, or using voice/IP, or a combination of these methods until all our interview questions were answered. Most interviews took about 45-60 minutes to complete. In a few cases we emailed our participants to finish an interrupted interview or to ask clarifying questions.

For a subset of program graduates for whom we could conduct classroom observations within a day’s travel, follow-up observations were scheduled to see if we could observe the participants’ current PPTs in action. Two observers
participated in each classroom observation, and both were blind to the PPTs of the teacher while they were observing until the follow-up interview at the end of the day. Observation data were collected by scripting as much as possible of the teacher’s discourse, actions, and activities during a day of teaching. Follow-up interviews were conducted for three purposes: (1) to further understand from the teachers’ perspective the relationship between their PPTs and classroom practices; (2) to verify the observers’ inferences made during observations; and (3) to clarify any questions the observers had.

In order to answer our research questions, data analyses were conducted using transcribed interviews, first by the original interviewer, and then by the research team for researcher triangulation. Although we had developed categories for the content and sources of PPTs in our previous research (Levin & He, 2008; He & Levin, 2008), we chose to analyze these data based on categories that emerged from the current data rather than using any a priori categories. Constant comparative methods were used after forming initial codes for the content and sources of PPTs (Glaser & Stauss, 1967; Lincoln & Guba, 1985). As a research team we collapsed multiple codes for a total of 96 PPTs into six categories, and then did the same for the sources of the PPTs they provided in their interviews. (See Table 1 for content categories and examples of PPTs). During further data analysis sessions, we searched for unique features and common patterns within cohort groups and across different years of experience. Table 2 shows the percentage of PPTs in each content category across the six cohort groups, and Table 3 compares the sources of the participants’ current PPTs with sources of PPTs in our initial study.

The main purpose for collecting observation data and doing follow-up interviews was to determine if we could see their PPTs being enacted even though
the researchers were not privy to the teachers’ PPTs during the observations. Observation data were also used to find examples or counter-examples of teachers’ current PPTs that we observed in action, as well as examples of their original PPTs that we also saw in their actions. This analysis was undertaken after all observations were completed and clarified by interviews with the teachers being observed. Appendix B displays an example of how we organized and displayed data collected from the classroom observations to indicate PPTs that were expressed or not, and PPTs that were observed or not.

Findings

1. How do participants describe the content and sources of their current PPTs?

Six content categories of PPTs emerged based on analysis of interviews with participants: Classroom Community, Differentiation, Student-centered Instruction, Organization and Classroom Management, Professionalism and Expectation. Classroom Community accounted for 21.88% of the total number of participants’ PPTs and the focus of these PPTs was on the importance of building a safe learning environment, promoting mutual respect, and establishing relationships with students. Emphasizing the importance of students feeling safe enough to take risks and ask questions, for example, one teacher said that it is important for the students to feel comfortable “doing it in front of their peers, and comfortable asking me for help. It’s really important that kids don’t feel scared, you know, to take a chance. I always talk about making mistakes. I point out when I make mistakes so they feel comfortable” (NP06, interview).
When asked about how they establish relationships with students, another teacher gave some examples:

I guess I would say that I took time to talk with the kids individually, either before or after school, just getting to know what’s going on in their lives and taking time to check in with the kids that were having difficulties as far as things going on with them outside of school. ... I gave my students an opportunity in the morning and at various times during the day to come talk to me if they were having difficulties.... (LB07, interview)

Differentiation was the second largest category of PPTs in this study and accounted for 18.75% of the total number of PPTs expressed by participants. During the initial interview, participants commented on using instructional strategies such as different grouping configurations, doing station work, and providing choices for projects and assignments. Most participants who stated PPTs related to differentiation also identified differentiation as a strategy for promoting student learning. For example, one participant stated, “I believe that differentiated instruction is key in the success of students. All students learn differently and it is the responsibility of the teacher to identify the best way their students can show academic growth” (YL06, interview).

In terms of Student-Centered Instruction, teachers indicated their beliefs that teachers facilitate student learning and also encourage student learning from each other. For example:

So if a child is not ready for fourth grade work, I work as hard as I can to meet that child at a second grade level or a third grade level. If a child is ready for sixth grade work, I make that available for them so that they don’t feel like
I’m not addressing their needs as well. So I guess meeting kids where they are, and understanding that all children have different needs, and meeting as many of those needs as I can, realistically, within a classroom (JG04, Interview).

Such beliefs accounted for 17.71% of the total number of current PPTs stated during this study. However, it is interesting to note that other teachers in the 2004 and 2005 cohort (with 5-6 years of teaching experiences) did not include student-centered instruction in their PPT statements.

The category of PPTs we coded as *Organization and Classroom Management* accounted for 15.63% of the total number of PPTs expressed. Most participants recognized that they developed their *Organization and Classroom Management* skills with more teaching experiences and noted the importance of developing their own way of managing the class: “It takes a while for teachers to feel comfortable managing the classroom, and over the years, I’ve developed my style of management to be quiet, calm, and consistent” (JL04, interview). Similarly, in terms of organization and preparation, teachers mentioned that being organized and “planning on Monday for the following week so that I have time to get everything in order” (JG07, interview) helps them make better use of instruction time.

*Professionalism* was a new and somewhat eclectic category not found in our previous research on PPTs that accounted for 15.63% of the total number of PPTs. The name for this category was taken directly from one participant’s description of her PPT related to the manner in which she chose to interact with students and present herself as a teacher:
I think it’s like professionalism. I think it’s really important for teachers just to exert that in front of children that like we are professional people. And this is how professional people act, just kinda how you interact with other teachers. Some of it is just teacher to teacher, but I think students also need to see that and there’s that... the whole idea of being a professional, respect. (NP06, Interview)

Other teachers also mentioned the importance of teachers having a positive attitude and communicating and collaborating with others, which we also coded as Professionalism. For example, this program graduate told us, “...you know, my attitude and how I react and what I... I have personal values and how I show it in the classroom is really important (JG07, Interview).

Some of the teachers in this study also explicitly stated the importance of having high Expectations for the students they work with, accounting for 10.42% of the total number of PPTs. Several teachers provided examples from their experiences to illustrate the importance of having high expectations that were similar to this teacher’s comment:

I even had one student who was considered... [as a]student that is behind in math or reading, and I’m like, well yeah, she’s a struggling reader, ... but her math is outstanding and I don’t know why she’s not excelling at math ... her mom usually liked to get her those services, pullout testing, she has all those things, and I’m like, I think that that hinders her. ...So I suggest let’s leave her [in the mainstream classroom] and see how she does. And she did great – 94th percentile in math, which was like, she grew 15 points from last year. Not to relate everything to EOGs [end of grade testing], but that’s kind of the
data that I have right now. But just so, I just expected her, I’m like, you can do this, I don’t know why you’re not. (SA08, interview)

One pattern we noted across this study was the number of PPTs expressed by teachers with fewer versus more years of classroom experience. That is, teachers who graduated in 2007-2009 expressed many more (5-8 PPTs) than teachers who graduated in 2005-2006 (2-5 PPTs) compared to those with the most experience who graduated in 2004 (only 2 PPTs). Also, when asking them to compare their original PPTs to their current ones, the teachers with more experience explained that they felt many of their original PPTs were “ingrained” or “what I do everyday” which may be one reason why as teachers gained more experience they expressed fewer PPTs.

The sources of PPTs expressed by the participants in this study were somewhat similar to those expressed in our initial study (Levin & He, 2008). As can be seen in Table 3, in this study 32% of all the sources cited for the participants’ PPTs collectively include their own teaching experiences (24%), observations of other teachers (8%). What they learned during their preservice teacher education program (coursework, required observations and teaching during fieldwork, and from faculty) was attributed as the source of 28% of their current PPTs, while their own family values and experiences as K-12 students (27%), and recent professional development, readings, and videos (12%) were also sources of their current PPTs. This compares to similar categories of sources of PPTs when they were preservice teachers as follows: 35% from the own family values and experiences as K-12 students, 35% from the required observations and teaching during their fieldwork as preservice teachers, and 31% from their coursework (including readings, theories, workshops). We also noticed that only one of the PPTs from the 2005
cohort came from their teacher education program, and that the vast majority of PPTs from the 2007 and 2008 cohort were attributed to their recent teaching experiences and readings and professional development.

2. How are the participants’ PPTs similar or different from when they were preservice teachers? How are participants’ PPTs similar or different across different cohort groups?

As can be seen in Table 2, comparing participants across the years and comparing current categories of PPTs with similar PPTs from our initial study (Levin & He, 2008), we found that beliefs about the importance of the Classroom Community to be a relatively stable category for both preservice (20.13%) and inservice teachers (21.88%). We also found that some PPT categories that emerged from the analysis of preservice teachers’ PPTs in the initial study, such as teachers’ roles and responsibilities, assessment, instructional strategies, nature of student learning, did not emerge in the analysis in this study.

While PPTs regarding Organization and Classroom Management are similar in terms of their percentages of PPTs in this category for both preservice and inservice teachers (15.63% and 12.71% respectively), it was noted that the 2004 cohort group, teachers with the most years of teaching experience, did not state any PPTs related to this category. Two of them mentioned classroom management and organization during their interviews (JL04 and TC04, interview), and TC had it as one of her original PPTs. During the interview, however, she mentioned that it is “ingrained” now and is no longer a salient PPT for her.

More current PPTs were categorized as Differentiation (18.75%), Student-Centered Instruction (17.71%), Professionalism (15.63%), and Expectation (10.42%)
compared to PPTs of preservice teachers in our previous study (see Table 2). In addition, the 2004 cohort group did not state any PPTs related to *Professionalism*. Neither did anyone in the 2004 or the 2005 cohort group state any PPTs related to *Student-Centered Instruction*.

We also analyzed our participants’ responses to our questions about changes in their beliefs over time by comparing PPTs expressed by cohort groups. Based on questions we asked about what has changed since they started teaching fulltime and about changes that they would like to focus on in the future, we heard about general changes they perceived since they started teaching, specific changes in PPTs that included both new PPTs and changes to some of their original PPTs, as well as potential PPTs for the future. Based on our analysis of their statements regarding change over time we uncovered patterns related to changes in beliefs about the teachers themselves, their students, and the curriculum they teach. For example, with regard to general changes perceived by the teachers who graduated in 2004 and 2005 and now have five or six years of experience, they expressed that they now have classroom management under control and feel that their organizational strategies are well established; whereas those who graduated in 2006 and 2007 with three or four years of experience expressed that they are more confident in teaching the curriculum and managing their classroom effectively, but that they are still working on balancing all aspects of their job. The 2006-2007 graduates also stated that they now feel less overwhelmed and more confident as teachers but are still striving to become the best teachers they can. Interestingly, those who graduated in 2008 stated that they were becoming more confident and comfortable with the curriculum and their classroom management, but believe organization is not under control yet, and so it is still on their list of current PPTs. By
contrast 2009 graduates with of the least amount of teaching experience expressed great confidence, said they felt fully prepared to be a teacher, and stated that there were no changes since they started teaching – including that they remained very organized as a teacher. Furthermore, their PPTs had not changed and they wanted to keep them, as did most of the other teachers who graduated in 2006-2008.

3. What do participants perceive as the supports or constraints for enacting their PPTs?

We asked the 18 teachers in this study about the supports they had experienced which facilitated them being able to enact or maintain their PPTs. The top six responses were as follows: Support from fellow teachers (mentioned by 8 of 18 teachers), principals or other administrators (7 teachers), mentors and friends or relatives who are teachers (6 teachers), getting recognition from parents, administrators, or other teachers (5 teachers), experience and seeing what works (4 teachers), and support from curriculum materials (4 teachers). One interesting source of support mentioned by two recent graduates with just one year experience included having a social life and exercise. We comment on this to acknowledge what we know about younger teachers from the Millennial generation born since 1980 (Howe & Strauss, 2000) who desire to find balance in their work life. We also know that Millennials, and Gen Xers who were born between 1960-1980, say they leave teaching because of inadequate salaries, lack of administrative support, too many classroom disruptions that affect their being able to teach including student discipline problems, and the perception of having little influence in decisions that affect them and their schools (Ingersoll, 2005). The perceived supports reported by the teachers in this study indicate that not only are these important forms of support for their being able to enact their PPTs, but that they are receiving the
support and recognition they need at this time from fellow teachers, administrators, mentors, and even parents which seem to be helping these teachers remain in the classroom.

On the flip side, however, we also asked what these teachers perceived as constraints to being able to enact their PPTs. From the 18 teachers interviewed there were a total of 47 responses which we categorized into eight groups mentioned by at least three teachers. The first constraint we labeled as unrealistic expectations placed on teachers (expressed by 11 of 18 teachers), and the second was lack of time (expressed by 8 of 18 teachers). Included in the category of unrealistic expectations placed on teachers were comments about having to keep up with pacing guides, testing pressures, the wide range of students’ needs, and changing curricula. For example, one teacher said “Juggling different students with so many different needs” (HK05) made it difficult for her to enact her PPTs, which included having a well-managed classroom, making learning meaningful, and encouraging a classroom of community of caring and respect. Lack of time was often mentioned as it related to pressures and expectations perceived as unrealistic by these teachers. The next two constraints, lack of resources and school culture, were both suggested as constraints by 5 of 18 teachers. School culture included both positive and negative comments about the social nature of the school community, levels of parental involvement, and communication within the school. Four more teachers also suggested specifically that too much or too little parental involvement was a constraint for them, and four teachers said that their own personal limitations were a barrier to fully enacting their PPTs. For example, one of the more experienced teachers said that she did not feel qualified to teach English Language Learners (JL04). Finally three teachers each specified that class size and
the misbehaviors of students were constraints for them. Only one of the 18 teachers (JA09) interviewed said she had no barriers this year, although she also said that she felt pressured last year because of too much parent involvement.

4. How do participants enact their PPTs in the classroom?

In order to explore if and how our program graduates enact their PPTs in their classrooms, we selected one teacher from each cohort group teaching nearby and conducted one full-day observation in each teacher’s classroom. After the observation and follow-up interview, we summarized examples and counter-examples of PPTs we observed in each classroom to create a two by two table for each observation to categorize PPTs in terms of whether they were explicitly stated by the participants, and whether they were observed in the classroom (see Appendix B for a brief example of how we organized the observation data collected). We found that most of teachers’ explicitly-stated PPTs were observed in their classrooms, as can be seen in Table 4. Furthermore, we also found evidence of Classroom Management and Organization, and building Classroom Community among all the teachers we observed even when these were not among their stated PPTs.

Three teachers did have explicitly stated PPTs about Classroom Management and Organization (MH06, KK07, and JA09). In a 2nd grade classroom we observed, for example, the teacher had all students’ assignment folders ready before students walked into the room and students clearly knew the routines and expectations when they were asked to work in different centers (KK07, observation notes). In the follow-up interview, this teacher commented that having all the materials ready “makes the day go by smoother” and mentioned that it was important for her to work with the students to set up routines and follow through with consistency
(KK07, interview notes). Even though the other three teachers we observed did not have explicitly stated PPTs about Classroom Management and Organization (JL04, SH05, CF08), various classroom management strategies were observed during their instruction to effectively manage students’ behaviors. It was also interesting to note that the teacher from the 2005 cohort had dropped her original PPT related to Classroom Management, while the teacher from the 2009 cohort added it as one of her new PPTs.

Establishing *Classroom Community*, especially in terms of respecting each student and encouraging student to take risks in class, was observed in all the classrooms as well. Among the six teachers we observed, three explicitly stated PPTs related to *Classroom Community*. However, we noted that all the teachers we observed provided affirmative feedback to students when they asked questions or made personal connections and encouraging comments when students were struggling to answer teacher questions. In a 5th grade classroom, for example, the teacher emphasized several times throughout her lessons that everyone makes mistakes, including the teacher (CF08, observation notes). All teachers we observed also welcomed students’ ideas and suggestions and students appeared to feel comfortable asking questions and even challenging the teachers.

In addition, we noticed that while *Differentiation* was the second largest category of PPTs and four of the teachers we observed included it in their PPTs, we did not observe very many examples of differentiation. Teachers from the 2004, 2005 and 2009 cohort (JL04, SH05, JA09) demonstrated some differentiation with regard to the use of materials, processes, products in their classroom instruction. Other teachers (MH06, KK07, CF08) also used various teaching strategies and provided choices in readings and assignments, but the main way instruction was
differentiated was through grouping students for reading and/or math by ability, which was common practice in two of the three schools where the teachers we observed were working. Some examples of differentiation that we did observe occurred in a 5th grade classroom. For example, students were working to create a mobile about a state for Social Studies where they were asked to provide a visual representation of key facts related to a particular state. The teacher let students select the state they wanted to work on and provided various materials for students to choose from for their project, and she also allowed a newcomer ESL student to select North Carolina for his state, hence benefitting from her model for this project. In her Reading class, this same teacher paired students based on their abilities and let them read to each other and work on comprehension questions together, and in Math she let them choose which group they wanted to be in based on their comfort level with the lesson content. She also differentiated the classroom management strategies she used with identified students with learning disabilities (CF08, observation notes). However, counter-examples were also observed where students were only grouped by their ability levels (MH 06, KK07, CF08).

**Summary and Discussion**

To summarize our findings in this study, we coded a total of 93 PPTs expressed by the participants in this study into six categories (see Table 1), and showed how these categories of PPTs varied between 2004-2009 (see Tables 2 and 4), yielding no discernible pattern within cohort group or by years of teaching experience. We also looked at how their current PPTs differ from PPTs they expressed as preservice teachers (see Table 2), noting that some of their PPTs remained the same and still relevant, some were new, and some dropped off because they are now ingrained and just part of who they are or what they do every
day. We also found that the categories for sources of current PPTs are similar to those in the original study (see Table 3), although in this study our participants’ more recent teaching experiences and observations of other teachers were a salient source for 32% of their current PPTs, and what was learned in the teacher education program accounted for only 28% of their current PPTs.

We also analyzed changes in PPTs and the supports and barriers they expressed with regard to being able to enact their current PPTs. PPTs about Classroom Community, Organization and Classroom Management, and Student-Centered Instruction were being enacted, at least in the classrooms where we observed. However, we noted that teachers with more years of experience no longer included Organization and Classroom Management as one of their current PPTs, although both were clearly evident in the classes we observed. The reasons they gave were because this was what they do every day and who they are. As TF04 stated “It is ingrained in my personality.” Such statements and our analysis of changes in PPTs lead us to speculate that our program graduates may be seeing their PPTs as goals they still want to accomplish, which may be one reason why each of the 2004 graduates have only two PPTs, while those with less experience have two or three times more PPTs and also still believe in their original PPTs.

PPTs we labeled as Differentiation were expressed by many of the participants, but we observed that differentiation was often reduced to ability grouping students for reading and math instruction in five of the six classrooms we observed. School policy dictated this structural feature in the classrooms we observed, but we were disappointed not to observe differentiation within those ability groups given that these teachers had a class called Differentiated Instruction during their teacher education program. We did observe the use of many
instructional strategies such as note taking, the use of pairs and small group work, graphic organizers, posting of essential questions, some use of non-linguistic representations, practice and homework, and regular verbal praise and corrective feedback (Marzano, Pickering, & Pollack, 2001). However, we observed that such strategies were not often differentiated for individuals who were English Language Learners (ELLs), or for other students with various learning or behavior needs. Instead we observed everyone using the same graphic organizers, being asked to take notes using the same format, and being given the same homework assignments. The Marzano strategies, as they have come to be known in our area, are encouraged by the administration in the schools in which we observed, but we did not see that they were connected to the PPTs expressed by the teachers in this study, and they were not used strategically for differentiation. Perhaps barriers expressed by the teachers in this study, which we categorized as unrealistic expectations for teachers and lack of time, contributed to the lack of differentiation we observed. However, this may also be a consequence of the fact that we only observed these teachers for one day, which may not necessarily have been representative of their typical practice. Furthermore, the category of PPTs we called Expectations, although expressed by a number of teachers in this study, was not observed in practice. And, interestingly, the wording of this PPT changed from when they were preservice teachers and said that “All students can learn” to their current belief that “All students can learn to their own individual potential”. Our speculation is that perhaps ability grouping of students reinforces differential expectations and perhaps also gives the message to teachers that they do not need to differentiate any further for their ability-grouped classes.

Limitations
Clearly this study is limited by the small number of program graduates we were able to locate to interview and to observe compared to the total number who graduated between 2004-2009, which was about 125. This study is also limited by the fact that we only observed one-third of the teachers we interviewed and then only for one day each. Obviously we would like to continue to locate, interview, and observe many more of our program graduates to see if we see similar or different patterns from what we discerned in this small-scale study. Another limitation is the potential bias of the first author in this study who coordinates the program these teachers graduated from and who also supervised many of the participants in this study during their field experiences. Having two other researchers with less investment in this program should have helped to mitigate any potential biases in the analysis and interpretation of these data, but reactivity and bias are always concerns in qualitative studies like this one (Maxwell, 2005). For example, we wonder if the participants said things during their interviews or did things during our observations that they thought we might like to hear or see, especially with regard to the sources of some of their PPTs. Finally, because we don’t know anything about the PPTs, supports, or barriers for enacting the beliefs of program graduates who left teaching, or who are still teaching but we did not interview or observe, we can only speculate about whether their PPTs are related in any way to why they stay in or leave teaching.

Conclusions

Nevertheless, we believe there is both local and global significance to this cross-sectional, longitudinal follow-up study of our program graduates. More globally, we learned that there is much complexity to what influences, enables, and constrains teachers to be able to enact their pedagogical beliefs. We observed that
much of what influences their teaching practices has to do with the current political and policy climate in education that is heavy on accountability, but we found that teachers are also influenced by their local teaching contexts, and by their personal life circumstances, all of which impact their professional identity development. We also learned that our graduates still attribute the source of some of their beliefs and practices to their teacher education program, including what they learned in courses and from the required field experiences. Furthermore, this cross-sectional, longitudinal study showed us that not everything these teachers learned in their teacher education program necessarily washes out once they enter the field.

In addition we learned that inservice teachers appear to view their PPTs as goals that still need to be accomplished, and drop off PPTs when they are achieved and become part of their everyday practice. More locally, this study also showed us that we need to do a better job teaching about the intention behind differentiating instruction. Our program graduates appear to have declarative knowledge of many strategies for differentiating instruction, and they hold beliefs and goals related to differentiation, but they do not appear to always be able to apply that knowledge conditionally. Also, based on what we learned about factors that support and constrain our program graduates from enacting their PPTs, we plan to better educate our students about ways they might be able to sustain and enact their pedagogical beliefs by making them more aware of the social, cultural, political and historical contexts they will face during their careers, and of the kinds of supports and a sense of belonging they can and should seek in the workplace (Fairbanks, et al, 2010). Continuing to express their PPTs through the personal theorizing process, for example, as another source of goal setting, along with expressing their visions, we believe will also help us help our program graduates develop metacognitive
awareness of their teaching practices and develop a sense of agency, which in turn we believe will help with their professional identity development (Fairbanks, et al, 2010).

Finally, we also see great benefit as teacher educators in getting into the field with our program graduates. We learned a lot from talking with and observing them, and we also hope they benefitted from the opportunity to reflect once again on their beliefs. Their feedback helps us see what we need to update and improve in our teacher education program, and also leads us to suggest that other teacher education programs would benefit from making follow-up work with their graduates a part of our regular work. We believe such work with program graduates could take on many different forms and be mutually beneficial for all parties, especially if the relationship becomes more reciprocal.
### Table 1. PPT Content Categories and Examples

<table>
<thead>
<tr>
<th>PPT Category</th>
<th>PPT Examples</th>
</tr>
</thead>
</table>
| Classroom Community | • Promote safe learning environment  
                        • The classroom is a community built from mutual respect  
                        • Showing genuine interest, building strong relationships |
| Differentiation    | • Everyone learns in different ways and it’s important to teach lessons in more than one way – focuses now on how this relates to learning styles.  
                        • Meet each child where they are and help them grow  
                        • Choices make more meaningful world |
| Student-centered Instruction | • Class should be student-centered with teacher as the facilitator  
                                  • Students learn through dialogue with each other  
                                  • Everyone is a learner and a teacher |
| Organization & Classroom Management | • Teachers must be well-organized and prepared  
                                         • Importance of teacher preparation, organization and “withitness”  
                                         • Strong classroom management |
| Professionalism    | • Teacher’s attitude and student’s attitudes have a strong correlation for success  
                        • Professionalism  
                        • Collaboration with other teachers is important |
| Expectation        | • Believing that all students can learn to their own individual potential  
                        • Having high expectations for the kids and letting them know that you have high expectations  
                        • High expectations for students |
Table 2. **Percentage of PPTs across Cohort Groups**

<table>
<thead>
<tr>
<th>PPT Content Categories</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>Total</th>
<th>*Pre-service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Community</td>
<td>33.33%</td>
<td>25.00%</td>
<td>26.67%</td>
<td>19.05%</td>
<td>11.11%</td>
<td>25.00%</td>
<td>21.88%</td>
<td>20.13%</td>
</tr>
<tr>
<td>Differentiation</td>
<td>33.33%</td>
<td>12.50%</td>
<td>20.00%</td>
<td>9.52%</td>
<td>27.78%</td>
<td>17.86%</td>
<td>18.75%</td>
<td>6.14%</td>
</tr>
<tr>
<td>Student-Centered Instruction</td>
<td>0.00%</td>
<td>0.00%</td>
<td>26.67%</td>
<td>19.05%</td>
<td>33.33%</td>
<td>10.71%</td>
<td>17.71%</td>
<td>8.05%</td>
</tr>
<tr>
<td>Organization and Classroom Management</td>
<td>0.00%</td>
<td>37.50%</td>
<td>13.33%</td>
<td>19.05%</td>
<td>5.56%</td>
<td>17.86%</td>
<td>15.63%</td>
<td>12.71%</td>
</tr>
<tr>
<td>Professionalism</td>
<td>0.00%</td>
<td>12.50%</td>
<td>13.33%</td>
<td>28.57%</td>
<td>0.00%</td>
<td>21.43%</td>
<td>15.63%</td>
<td>6.99%</td>
</tr>
<tr>
<td>Expectation</td>
<td>33.33%</td>
<td>12.50%</td>
<td>0.00%</td>
<td>4.76%</td>
<td>22.22%</td>
<td>7.14%</td>
<td>10.42%</td>
<td>5.51%</td>
</tr>
</tbody>
</table>

**Source:** Levin & He (2008)

*Note.* The percentage of PPTs in content categories for preservice teachers does not add up to 100% because there are categories existed from the previous study on the preservice teachers that did not emerge from the data in this study (e.g. roles and responsibilities, assessment, instructional strategies, nature of student learning).
### Table 3. Comparison of original and current sources of PPTs

<table>
<thead>
<tr>
<th>Original sources of PPTs (Levin &amp; He, 2008)</th>
<th>Current sources of PPTs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Family values and K-12 experiences</td>
<td>• Recent teaching experiences (24%)</td>
</tr>
<tr>
<td></td>
<td>plus observing other teachers (8%) = 32%</td>
</tr>
<tr>
<td></td>
<td>• UNCG teacher education courses,</td>
</tr>
<tr>
<td></td>
<td>required field experiences (teaching</td>
</tr>
<tr>
<td></td>
<td>and observations), and faculty = 28%</td>
</tr>
<tr>
<td>• UNCG – teaching experiences &amp;</td>
<td>• Family values and K-12 experiences</td>
</tr>
<tr>
<td>observations during required</td>
<td>= 27%</td>
</tr>
<tr>
<td>preservice fieldwork = 35%</td>
<td>• Recent professional development,</td>
</tr>
<tr>
<td>• UNCG- courses, readings, theories,</td>
<td>readings, videos = 12%</td>
</tr>
<tr>
<td>and workshops = 31%</td>
<td></td>
</tr>
</tbody>
</table>
### Table 4. **PPT and Observation Matrix**

<table>
<thead>
<tr>
<th>PPT Observed</th>
<th>PPT Not Explicitly Stated</th>
<th>PPT Explicitly Stated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>04</td>
<td>05</td>
</tr>
<tr>
<td>Classroom Community</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Differentiation</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Student-Centered Instruction</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Classroom Management &amp; Organization</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Expectation</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Professionalism</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PPT Not Observed</th>
<th>Classroom Community</th>
<th>Differentiation</th>
<th>Student-Centered Instruction</th>
<th>Classroom Management &amp; Organization</th>
<th>Expectation</th>
<th>Professionalism</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
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<tr>
<td>X</td>
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<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
Appendix A. Interview Protocol

We know that teachers’ PPTs change over time and they develop with our teaching experiences and are impacted by our teaching contexts. Through this research, we would like to know:

**Phase I – Current PPTs**

1. What are your PPTs/beliefs that guide your teaching?
2. How do your PPTs look like in your classroom?
3. What are the sources of your PPTs?
4. What is the order of your PPTs?

**Phase II – Compare PPTs**

1. Similarities:
   a. How have these PPTs been sustained?
   b. Why do you still think they are important?
2. Differences:
   a. Why have these PPTs been dropped off?
   b. What barriers or constraints have you experienced?
   c. Comparing to when you first started teaching, what has changed?

**Phase III – Future PPTs**

1. How long do you think you will remain in teaching?
2. Ideally, how will your PPTs play out if there weren’t any barriers or constraints?
3. What do you think might change or what are some things you want to change about your teaching in the next 5 years?
## Sample Observation Notes

<table>
<thead>
<tr>
<th>Time</th>
<th>Critical Incident Observed</th>
<th>Related PPTs</th>
</tr>
</thead>
</table>
| 10:25 | Teacher gave directions regarding the activity to locate cities on the map:  
- Teacher used overhead to show students maps and gave directions  
- Teacher reminded student of strategies to find places on a map;  
- Teacher asked students to explain which map to use | Classroom Management and Organization |
| 10:35 | Students started to work on finding the cities.  
- Although teacher instructed that students work with their partners, half of the students in class worked individually.  
- Teacher walked around and answered questions.  
- When one student finished her work, teacher asked her to walk around and help others (T: give clues, not point out the location); 3 students walked around and helped others | Student-Centered Instruction |

## Sample Observation Analysis

<table>
<thead>
<tr>
<th>Category</th>
<th>PPTs</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student-centered instruction</td>
<td>1. Students are teachers too</td>
<td>During Social Studies Lesson, CF asked students who finished assigned tasks to facilitate others’ work.</td>
</tr>
<tr>
<td>Classroom Management &amp; Organization</td>
<td>none</td>
<td>CF used various classroom management strategies during her class and managed student behaviors very effectively. Her classroom was very well-organized.</td>
</tr>
</tbody>
</table>

## PPT and Observation Matrix

<table>
<thead>
<tr>
<th>PPT Observed</th>
<th>PPT Not Explicitly Stated</th>
<th>PPT Explicitly Stated</th>
</tr>
</thead>
</table>
| Classroom Management & Organization | Student-Centered Instruction  
PPT: Students are teachers too  
Differentiated Instruction  
PPTs: Treating all students fairly but not the same. Embracing all differences. Differentiating. |  
Differentiated Instruction  
PPTs: Treating all students fairly |
| Observations | but not the same. Embracing all differences. Differentiating. **Expectations** **PPT**: Believing all students can learn to their own individual potential. |
References:


Hofer, B. K., & Pintrich, P. R. (Eds.) (2002). Personal epistemology: The psychology of beliefs about knowledge and knowing. Mahwah, NJ: Lawrence Erlbaum.


