

How the Cultural Contexts of Urban Teaching Affect Novice Science Educators: Implications for School Leaders

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While the challenge to retain highly competent teachers affects all schools, the crisis is critical in urban districts, which historically suffer from high teacher turnover (Ingersoll, 2004). This high turnover is especially problematic in the content areas of science (Ingersoll & Perda, 2010). Through ethnographic case studies the first year teaching experiences of three teachers, working in urban districts, are documented. Results focus on how the tri-cultural spheres of teacher socialization (personal, institutional, and societal) shape novice science teachers' induction into the teaching profession and the implications for school leaders. In addition the analysis of the data suggests that novice's needs and concerns differ based on the relationship between image of self in response to school and local community culture. The purpose of this study is to examine the commonalities and differences in novice teachers' experiences in order to help increase school leaders' understanding of how to better support teachers to work in urban districts. A current demand for retaining the supply of quality science teachers reinforces the need for this type of research

Introduction

The number of teachers needed to fill K-12 public school classrooms is substantial and growing (Blank & Langesen, 2003). Every school day, nearly a thousand teachers leave the field of teaching (US Department of Education, 2009). Another thousand change schools, many in pursuit of better working conditions, and these figures do not include the teachers who retire (Ingersoll, 2003). A conservative national estimate of the cost of replacing public school teachers who have dropped out of the profession is \$2.2 billion a year; if the cost of replacing public school teachers who transfer schools is added, the total reaches \$4.9 billion every year (National Academy of Sciences, 2007). Complicating matters, the demand for teachers is uneven, with most acute need in locations serving poor, minority youth in urban areas and teachers new to the profession are far more likely to leave than are their more experienced counterparts (Darling-Hammond, 2002). The largest 100 urban school districts in the U.S. educate approximately 40% of all non-white students and 30% of the students from low income families yet; teacher demographics in these large urban areas do not come close to matching the student population (National Center for Education Statistics, 2005).

Concern over shortages of science teachers and the impact on the state of science education have reached new heights (Calabrese-Barton, 2001). The most compelling aspect of the effects of poor science instruction in urban districts is the wide disparities between the education of African American and Caucasian students, as shown by attainment on national and local tests, dropout rates, and post school success in the labor market in STEM fields. For example Berliner (2006) compared the relative performance of African American, Hispanic, and Caucasian students using data from the Third International Mathematics and Sciences Study (TIMSS). When the data were disaggregated by race, and each racial group was scored as an individual country, stark differences were evident in the outcomes of White, Black, and Hispanic students. Berliner noted “in science the scores of White students in the US were exceeded by only three other nations. But Black American school children were beaten by every single nation, and Hispanic kids were beaten by all but two nations” (p.B3). Results such as these are a clear indicator of an educational system that is oppressive to minorities, especially in urban schools. High profile reports from groups such as Commission on Mathematics and Science Teaching for the 21st century, the National Academy of Sciences and the National Research Council have all directly tied shortages to the quality of science education and in turn to the future well-being of the economy and the survival of the nation (NCEI, 2005). The inability of schools to adequately staff classrooms with qualified teachers has received widespread coverage in the national media, has been heralded as a major educational problem, and has been the target of numerous reform and policy initiatives (Oakes, 2002). Although it is assumed the problem is only attributed to a teacher shortage in science, the recent literature paints a different picture. For every science teacher leaving the profession there is one in the pipeline (Ingersoll, 2003). Therefore, there is also a problem with high turnover. This analysis suggests that recruitment programs alone will not solve the staffing problems of schools if they do not also address the issue of teacher retention.

Related Literature

"While urban schools do not necessarily require of their teachers a different set of skills or competencies than suburban or rural schools, they certainly demand that teachers be cognizant of

the particular contextual and cultural variables that pertain to the urban setting" (Montero-Sieburth, 1989 p.333). Urban school districts and the students within them have distinct characteristics that should be addressed in the teacher's induction year. Urban school systems are usually large causing students to gain anonymity (Cochran-Smith, 1995). Urban districts contain multiple ethnicities and religions and there is a greater mobility of the student population. In Lois Weiner's book, Urban Teaching: The Essentials (Weiner, 1999), she discussed some of the additional considerations when working in urban populations. Weiner notes that teachers need strong content knowledge to understand and communicate the important aspects of the material through multiple approaches and teaching strategies. Teachers are successful with urban students when they create lessons that relay the information to their students in a meaningful way. She acknowledges that teachers need to be empowered to become leaders of a classroom of learners and not just transmit knowledge. To make these changes teachers need support and guidance from school leaders to make decisions within their classroom based on the needs they are seeing.

A supportive school leader can play a key role in helping new teachers not only survive, but thrive during their first year. School leaders can be instrumental in helping novices find a mentor teacher, take part in professional development and make full use of planning time. In addition to giving teachers formal opportunities to learn and collaborate, principals can boost morale simply by taking time to work alongside new teachers (DePaul, 2000). Unfortunately, rarely are administrators in urban districts able to provide new teachers with efficient support to help them succeed through the challenging first three years of teaching (Ingersoll, 1999). This often leaves beginning teachers feeling like failures and their self-confidence shattered; consequently, only the strong and most determined survive (Colbert & Wolff, 1992). Therefore, the urban teacher turnover will continue to be a problem unless improved means of understanding, supporting and training new teachers are developed and adopted by urban administrators.

In addition to support and training, urban administrators should help novice teachers create a tri-cultural balance among the societal, institutional, and personal contexts of teaching. Although there has been very little research in this area, a growing literature on cultural relevance provides insight into the importance of these relationships. The literature suggests that the combination of diverse students in Eurocentric schools results in a conflict of cultures (Ladson-Billings, 1995). Although schools endorse societal beliefs concerning equal treatment and equality of educational opportunities, certain practices such as the hidden curriculum, tracking and discriminatory discipline practices are in direct conflict with those beliefs (Irvine, 1992). The conflict between a school's culture and practices is characterized on the classroom level by a lack of understanding of diverse students' cultural values, norms, styles and language. Lack of "*cultural synchronization*" because of misunderstanding, missed communications and low or no teacher interaction can result in novices having a negative teaching experience early on (Irvine, 1992). It is important for novice teachers to increase their understanding of the integral relationship between culture and social behavior and the need to view their work within a cultural context (Duncan-Andrade, 2005). In addition, it is important to have a keen awareness of their culture. "For self-understanding, teachers should recognize their own ethnocentrism and bias and realize that their worldview is not universal nor their cultural norms absolute" (Rodriguez, 2001, p. 1120).

Cultural competent teachers are needed to work with the culturally and linguistically diverse students in our nation's urban schools. Students from urban communities have diverse learning traditions, styles and preferences that are influenced by their cultural backgrounds; these

learning styles may be in disharmony with the beliefs and values of their classroom teacher and the latest pedagogical theory used in classrooms (Berry, 2001; Ladson-Billings, 1995; Nieto, 1992). The racial and cultural incongruence between teachers who are from the dominant culture and students who are not may be one factor that explains high teacher turnover (Ingersoll, 2001). Thus, some researchers think that it is crucial that teachers begin critical discussions about their own cultural identities and the cultural identities and perceptions of their racially diverse students (Haberman, 2004). The inability of today's middle class teachers to appreciate and understand the cultural capital that each student and urban community contributes to the classroom may be the reason that minority students are not succeeding in school. A major task of urban administrators should be to help beginning teachers negotiate the conflicting aspects of the following three cultures; personal, institutional (urban districts) and the local community.

Purpose of the Study

Many new science teachers will need to take positions in urban schools without working with teachers of diverse urban students prior to taking these positions. With little or no exposure to teachers of urban youth, either as student teachers or through an examination of current research, which rarely focuses on a single secondary content area, prospective teachers will find it difficult to learn how to negotiate the cultural contexts of the teaching profession. Therefore it is essential for school leaders to begin to examine the cultural contexts of urban science teaching to help understand and support the personal and professional well-being of novice science educators. A current demand for retaining the supply of quality educators reinforces the need for this type of research.

Theoretical Framework

Personal Culture

One's perception is their reality; therefore the understanding of knowledge is grounded and constructed within a particular social, political, cultural, economic, historical, and linguistic reality (Haberman, 2004). In making meaning of what occurs in the classroom and local community a new teacher uses the filters or lenses of prior experience to interpret what is occurring (McAlpine & Crago, 1995). In other words, prior experience helps novices predict outcomes and make decisions about practice. For new teachers, if the culture is similar to their own experiences, then they can depend on prior experiences with greater conviction on the interpretation of their new surroundings. One's personal culture is derived from a variety of influences; racial/ethnic, religious affiliation, socioeconomic background, all contributes to the basis for social organization. Socialization into any new environment greatly depends on the lens of perception or cognitive framework in which one views the world. Therefore, culture can be viewed as the foundation for adaptation. Other characteristics that influence cultural socialization include extent of teacher training and knowledge of subject matter (Tobin, Roth & Zimmerman, 2001). Novice teachers come into the profession with developed viewpoints, values and goals about the purpose of education and how students should be educated. These viewpoints, values and goals are influenced by past and present experiences and are tested in the initial years of classroom teaching. A lack of experience and support during the induction years can result in novices only relying on personal value systems for solutions to the challenges of beginning teaching.

Institutional Culture

A second form of socialization is assimilating into the school culture in which one is employed. Urban schools have been described as sites where students defy teachers, parents and administrators; where administrators are concerned with keeping their schools open by trying to raise standardized assessment scores, provide security and uphold schooling as impermeable; where parents are disenfranchised from the schooling effort; where teachers view students as the enemy; where training rather than education takes place; and where daily survival is the paramount concern (Montero-Sieburth, 1989). This is of greatest significance in the identity formation of most urban teachers for a variety of reasons. One is that the teacher is being more intensely and extensively initiated into the norms and practices of the school than typically occurs in the pre-service level, even including the student teaching experience. (Ayers, 1998) Second, within the school, the carriers of the local culture and traditions are immediately and inescapably present; it is as if the novice is suddenly thrust into a "totalizing institution" Other factors in the school setting that influence socialization include guidance and support from administration, teacher colleague support and access to curricular and professional development resources. In particular, according to most of the literature, urban public schools have unique cultural characteristics that must be negotiated by the staff:

1. The schools serve highly-diverse populations whose cultural model of schooling is often different from and in conflict with that of the dominant culture (Ogbu, 1995).
2. The schools serve a large number of students who are linguistic minorities (Ogbu,; Seller & Weis, 1998, 2000).
3. A lack of funding dictates decisions about teaching and learning (Weis, 2000).
4. High-stakes test results are the primary measure of teaching and learning.
5. Decision-making is centralized and invested in a bureaucracy that is politically isolated from the local communities' main interest (Weis, 2000).

Local Community Culture

Last, the local community plays a significant role in the socialization of a novice educator. Most new urban teachers do not reside in the communities in which they teach; therefore their impact as role models and exposure to the local community is limited to the scheduled school day (Zeichner & Gore, 1990). The diminished sense of community lessens the communication between parents and school people disenfranchising parents from the schooling effort. In addition, modern cities are characterized by cultural heterogeneity (Ladson-Billings, 2001). Ways of life of urban community members usually differ from the values and beliefs of white middle class science educators. Despite the cultural diversity within the urban community, the prevailing assumption among many white middle class novice educators is achievement for minority low-income students is the same as it is for any other group (Perry, 2003). If you know what works for suburban white students, then you know what works for urban minority students. But since learning is fundamentally contextual, there are different social, emotional, cognitive, and political competencies required of low-income urban youth (Perry). In some instances, the rules from family and community may be compatible with those of the school, but, in others, the incompatibility of home/community and school norms can create dissonance for the urban student. This conflict creates a gap between the urban community culture and the school culture. In the book *Young, Gifted and Black*, Perry argues that low-income urban minority youth are not successful in American public schools and their families are at odds with the structure and

standards due to the following dilemma: Low-income urban minority youth and adults have a hard time committing to working hard in American public school districts, given that:

1. They cannot predict when or under what circumstances this hard work will be acknowledged and recognized by individuals in and out of school.
2. Achieving in school is separation from the cultural reference group.
3. No matter what other members of the reference group accomplish, these accomplishments are not likely to change how the group is viewed by the larger society or to alter the castelike position in the society. (p. 4-5)

Tri-cultural Conflict

Novice educators come into the classroom with strong beliefs about the teaching of science that may be in direct contradiction with the beliefs and norms of the school and local community. Research evidence has shown that teachers within impoverished urban schools are so overwhelmed by the demands of their teaching environments that they can barely function (Au, 1998). They carry theory around in their heads, but they often do not know how to apply this knowledge in the given context because they are so at odds with the institutional policies and practices of the district (Wilkinson, 1997). Compounding their predicament is the instructional grouping design for diverse categories of students, which results in tracking, bilingual education, and vocational education (Montero-Sieburth, 1998). Therefore, even among the best-intentioned urban teacher who believes in differentiated instruction in the forms of constructivist, inquiry based, and critical thinking teaching styles when applied to low socioeconomic students these philosophies and practices are not implemented and teaching and learning has little relevance to urban students' lives. This existence offers few opportunities for urban teachers to consider their roles in the context of the unique personalities and cultures of their schools and communities. Part of succeeding as a teacher and staying with the profession is socializing into being a member of the teaching community. In the suburban setting, the suburban new teacher begins to teach in the school that has a familiar culture and teaches students with a familiar culture. The socialization process is smooth because there are fewer cultural conflicts (Cochran-Smith, 1997). When the new suburban teacher goes to teach in the urban setting the school culture is different from what he/she experienced as a student or student teacher. The culture of the local community, students, and school is different from that of the novice teacher. There is conflict among three cultures making it difficult for urban novice educators to negotiate the cultural spheres of socialization. The participants of this study were particularly vocal in their criticism of teaching in urban districts. They found adapting to the cultural spheres of socialization the most challenging component of their new job teaching science. They were never taught how to negotiate the unfamiliar school and community cultures in contrast to their own personal cultural beliefs.

Context of the Study

The New Teachers Dinner Club was developed to support novice math, science and elementary teachers. The majority of the dinner club participants taught in an urban district. The district with the largest number of dinner club participants had approximately 30,000 students. Like many other urban school districts, the community suffers from a lack of physical and human resources, several schools are labeled as under performing based on standardized tests scores and over 50%

of the students come from low income households. In addition, ninety percent of the teachers taught in schools in which more than half of the student population is identified as minority. On average approximately ten to fifteen novice teachers would attend the NTDC meetings. The demographics of NTDC participants reflected beginning teachers nationally. They were predominantly middle class white females. The teachers represented an uneven gender mix of 70% females and 30% males. The majority of the teachers (60%) taught science in grades 5-8 middle school range. Approximately 27% taught grades 1-4 elementary range and the smallest portion taught grades 9-12.

Research Design

Three qualitative methods were used to gather data and develop case studies; field notes from eight dinner club meetings, semi-structured interviews and classroom observations with three of the dinner club participants. Interviews and field notes were audio taped and transcribed for analysis. There were two dinner club facilitators, field notes were recorded immediately after the dinner meetings. Dinner club meetings were two hours long and consisted of dinner for the first hour and a discussion related to a specific topic for the last hour. Each discussion topic correlated to classroom or educational topics of personal concern expressed by participants through an information survey. Three participants of the dinner club were selected to serve as the focus of the case studies. Participants were selected on the basis of the following criteria: (a) each teacher taught middle school science; (b) taught in an urban district; (c) had a strong commitment to attend all of the NTDC meetings; (d) was in his/her first year of teaching. Each focus teacher was interviewed twice for 50-90 minutes, and two observations of their science instruction were conducted to assess the impact of teacher background against the impact of school and local community contexts on induction.

Data Analysis

The categories and theoretical statements in this paper are grounded in qualitative data drawn from three case studies of novice urban teachers. Data were collected and analyzed according to Strauss and Corbin's qualitative research guidelines for grounded theory research and constant comparative analysis using open and axial coding (1994). The grounded theory methods focus on the discovery of categories and relationships between and among categories relevant to a particular phenomenon (Strauss & Corbin, 1994). The research procedures used allow categories to emerge directly from the data into the developing model. In the first round of coding, segments of data were organized according to the categories cultural socialization forces identified in the literature (personal, institutional, and local contexts). In the second round of analysis, emergent themes were identified around the impact of the tri-cultural socializations forces on teacher beliefs about urban communities, the teaching profession, and teaching practices. This involved the use of the constant comparative methods, a process designed to generate, revise and regenerate categories and codes (Miles & Huberman, 1994). Next, a descriptive case memorandum for each focal teacher was developed which included examples from their classroom observations, interviews, and NTDC discussion comments. From these cases emergent themes regarding the link between cultural socialization forces and teacher induction were identified. Last, a cross case analysis of the case studies was conducted. From

the cross-case analysis matrices and other displays were developed to further understand the data.

Three focus teachers were the subjects of the case studies. James, Velma, and Lamar were all first year middle school science teachers, of European descent, teaching in an urban district in which they did not reside. Teaching was a career change for the three novices. James was a former EMT, Lamar a former engineer, and Velma was a former early childcare provider. Two of the three received their teacher training from a traditional graduate teacher education program and the third, Lamar, received his training from an alternative teaching certification program. All three regularly attended the New Teachers Dinner Club meetings

Results

The teaching experiences of three novice educators were examined as they undertook their first year of teaching in a culture different than their own. Their stories demonstrate the challenges of teaching in an urban setting, and it offers suggestions for novice educators who may be experiencing, “tri-cultural” conflict. It suggests that a tri-cultural conflict is a clash between ones personal beliefs and value system (culture), with the culture of their institution of employment, and the local community. Thus, for a novice urban teacher acculturation into the profession is confounded by a need to also become acculturated to a new set of school and local community values, and in some instances language (McAlpine & Crago, 1995) While these novices’ experiences do not reflect all urban educators, they provide some noteworthy variations in the interrelationships among the societal, institutional and personal cultural contexts of teaching.

James “Where I am now [urban district] those ideas are out the window”

James was a dinner club participant who was very unhappy with his first teaching assignment being at an urban school. He took a position in an urban district because there were no available science positions at the suburban districts close to his home. He had very progressive teaching ideas, but felt restricted because of his job assignment. James was a perfect example of a novice who carried educational theory in his head, but did not know how to apply this knowledge in the given context. He was conflicted with institutional policies, his own bias that certain teaching methods can only be done under familiar conditions, and the lack of support and connection to the local community. His tri-cultural conflict did not allow him to appreciate the unique personalities and cultures of the school, students, and the community:

School cultural conflict.

My teaching philosophy says a whole lot about building communities and using constructivist inquiry based teaching styles. Where I am now [urban district] those ideas are out the window. The main reason why I am unable to teach in this fashion is because the majority of my students are special ed. or ELL and getting my students to be still and stay on task is a big challenge. I don't really use any philosophy because the main goal of the school is behavior modification instead of teaching in a way where learning can occur. In reality I'm not doing much teaching for learning, I'm just getting through the curriculum and not focusing on the needs of the students. The system just wants me to get them [students] ready for the test. I'm just shoving information at them and saying that I taught them, but in reality I haven't. This situation makes it hard to collect a paycheck

every two weeks because I know there are issues with my teaching and student learning. (Interview, March, 2009)

James struggled with a school culture which served a large number of students who are linguistic minorities, teachers were viewed as trainers rather than educators, and high-stakes test results were the primary measure of teaching and learning. These institutional factors were such a burden to James he questions whether contemplates leaving the profession. Instead of trying to implement new teaching strategies and putting his teaching philosophy into practice, he fell victim to the “nothing can be done here” scenario. James’ institutional conflict was compounded by his personal belief system that doing well in math and science equals success. He expected his students to share his values despite their exposure and experiences with science education:

Personal cultural conflict.

I was always into science. I was an EMT in the military prior to coming here. I think it has always been about science because it was ingrain in me coming up that if you were going to be somebody and make money that science or becoming a lawyer or a doctor was the way to go. So that had a huge influence in my decision. I always took my math and science courses seriously. That is why I find it hard to understand why the students don’t take their education seriously. I had fun in school but I always knew the importance and the power of a good education. (Interview, January 2009)

In spite of the fact that students in high-poverty urban settings are quantitatively lagging behind their suburban counterparts on standardized tests, school grades in science courses, have reduced access to new textbooks, scientific equipment, and science related extracurricular activities, they are still expected to perform at the same level (Oakes, 2000). Urban students have limited access to high-level math and science courses and are disproportionately tracked into low-level classes in which educational achievement focuses on behavior skills and static conceptions of knowledge (Calabrese-Barton, 2001). Further, in these classes students spend more time reading from textbooks and completing worksheets and are expected to be passive learners rather than active users and producers of science related knowledge (Calabrese-Barton, 2003). Unfortunately, James assumes that his students are not serious about their math and science courses instead of assuming they are lacking opportunities to experience science in positive authentic ways. In addition, James believes students of a certain race and socioeconomic backgrounds are better prepared to do science. This belief system is detrimental in a diverse urban school setting. During a December dinner club discussion James blames a lack of fundamental skills as the reason why students in urban districts are less prepared to do science than suburban students. He equates their race and socioeconomic status to their academic ability:

Community cultural conflict.

I think you have to have the fundamentals in any field. Students in suburban areas for the most part have the fundamentals to do well in school. I don’t think the students I am teaching have the fundamentals or the language of science and that is a big obstacle in itself. How am I supposed to teach middle school science lessons on the solar system or physical science when most of them read and write at a third grade level? (Dinner Club Field Notes, December 2008)

James speaks of the fundamentals of doing well in school in an ambiguous manner. He is familiar with a culture that sends children to school with certain skills and behaviors. Instead of James establishing these skills sets in his class or adapting his teaching style to meet the needs of his students, he discredits their talents and potential. Although he has never taught in a suburban school system, he assumes students in suburban districts are better prepared because he is familiar with his own experience as a successful suburban student.

Velma “I grew up in an affluent area of New Jersey and what was cool was getting good grades”

One of the greatest barriers is the difficulty in transforming novice white middle class teachers’ attitudes regarding race, class, ethnicity, and critical awareness of structural inequities in America (Cochran-Smith, 2001). Velma was another teacher who experienced tri-cultural conflict during her first year of teaching. Her memories of her own “picture-perfect” schooling experience fogged her view and caused her to react negatively to the experiences of urban youth:

Personal cultural conflict.

The other thing we are battling is being cool does not mean being smart. There are a couple of girls who do well in school; there is one girl in the 7th grade and two girls in the other 7th grade class, and they all happened to be white. They were ostracized because they were not part of the culture and no one gives them the time of day. It is so hard for me to understand why they act like this [students of color]. I grew up in an affluent area of New Jersey and what was cool was getting good grades. Everyone worked really hard and talked about their class rank and the amount of homework they did. Everybody was in a race to be in the top five spots. (Interview, February 2009)

Velma’s recollection of her secondary school experience is similar to most successful students; all students at the school she attended did well. Therefore her experiences with “good” students are primarily at affluent suburban schools and her affiliation with students who struggle academically is at the urban school where she teaches. She sees this as a static situation, and her belief system becomes an obstacle to helping her students’ change their perception of being cool. Another factor that contributes to Velma’s tri-cultural conflict is her interaction with the parents and local community members. The most effective community experiences are sustained efforts to help prospective teachers learn how to interact in more genuine ways with parents and other adults from different racial/ethnic and socioeconomic backgrounds (Ladson-Billings, 2001). When novices experience cultural conflicts with the local community the inevitable occurs, miscommunication and confrontation with students, parents and community leaders. If novices are not part of the community they teach in, the result can be feelings of alienation, diminished self-esteem and an “us versus them” attitude. Like several other first year teachers, Velma expressed a concern with classroom management techniques. During one of the observations students were playing cards, throwing objects, calling out and paying little attention to the science lesson. Velma tried to work with the parents of the students who were giving her the most trouble, but she viewed them as part of the problem:

Community cultural conflict.

Parents come to meetings and cry. I am surprised because they are disappointed [with their child’s behavior] but there are no plans in place and the parents are like I never

finished high school, and I find that the kids and the parents are not very open minded about wanting more or better for themselves. What's wrong with continuing the cycle? I'm not trying to say there is anything wrong with the Hispanic culture, but they don't have any vision for improvement, or wanting something better, or traveling, or wanting to find out about new cultures and new ideas. I keep telling the kids that education really is power. It buys your way to wherever you want to go. Their response is, "I don't want to go anywhere". They do not perceive education as an important value. What is even harder is that there are about 300 employees and only about 20 of them are Hispanic and half of them are custodians or ELL aids. The rest of the staff is white. There are only about 4 teachers who are Hispanic, so it doesn't give them any role models or anyone to look up to. Plus, most of the parents work in factories or menial labor especially the ones who don't speak English. Some of the parents work in the mall or a fast food restaurant or they don't work at all and are on welfare. I don't think these lifestyles are bad, but there is more out there. The other thing that is hard to deal with in their [Latino] society is that it's so matriarchal and mom is just god and whatever mom says or does goes. I think this is part of the teen pregnancy problem. They believe if you become a mom you have power. So becoming a mother gives the young ladies a chance to become someone. I have a bunch of students who are having sex and talking about getting pregnant. There is a sixth grader who is pregnant there are several of the 8th grade boys who have gotten girls pregnant and brag about it (Interview, April 2009).

Velma has differentiated herself from the Latino community, but fails to recognize she is an integral part of her students' lives. She acknowledges there is a lack of positive role models employed at the school, but she can't see herself as an agent of change or a role model in the community. She describes the Latino community as not being open-minded to other ideas and cultures, but finds no faults in her lack of knowledge of different groups and her view of success. Despite Velma's negative comments about the local community, she was a foster care provider for several Latino youth in the community and is currently putting one of her former Latino foster children through college. Velma wants to be an effective science teacher and empower her students to be successful in life; regrettably Velma's definition of success is framed in white middle-class values. Her desire to change them without changing herself is one of the main reasons she is experiencing tri-cultural conflict. In addition to feeling unprepared to work with diverse students, Velma is at odds with the school wide pressure of preparing students for the state high-stakes tests.

School cultural conflict.

We are also responsible for teaching WIN (writing instruction now). Every subject area is responsible for teaching the kids how to write cohesive paragraphs to help with the open response questions [on high stakes exam]. Also in homeroom we are responsible for administering and correcting school wide morning math activities. So I'm a math, English and science teacher. I don't like that I have to use science time to teach other subjects because there is a citywide final and my test results are compared to the results of all the other middle school science teachers in the district. (Dinner Club Field Notes, November, 2008)

In addition to the regular stressors of first year teaching, urban educators have to endure the burden of increased accountability and high-stakes testing, poor working conditions, lack of autonomy in teaching and limited input into school decision making. State-sponsored standardized testing, and the homogenization of curricula that accompanies it, had a huge impact on Velma's idea of what it means to be a middle school science teacher. Velma fails to understand that high stakes tests and accountability requirements don't mean that her work in science education is restricted to school policy.

Lamar “Unfortunately, no one has taught these kids the value of exploring”

Like James and Velma, Lamar was struggling with how to negotiate the cultural spheres of teaching. He discovered quickly that his passion and knowledge of the subject area were not enough to be a successful urban educator. Lamar was raised in an environment where science was done for fun therefore, he found it difficult to believe that his students didn't value science exploration. As a child he was able to see how science class connected to his home adventures of taking things apart with his dad and brother, but the science experiences he provided in the classroom were disconnected from his students' home life:

Personal cultural conflict.

I've always wanted to teach science. When I was growing up I would love to take things apart, like the lawnmower, and put them back together and show my brother and father how I did it. For me being a science teacher is like helping others explore the unknown. Unfortunately, no one has taught these kids the value of exploring and because of tests requirements I am limited to teaching specific topics. I really don't know how to get through to these kids. Some days a lesson goes well but on other days I feel like I'm speaking a different language to them and all it takes is one thing to get them off track and I'm done. For example the other day a student got into an argument in the previous class and she brought her attitude to my class. That ruined the class period. She wouldn't stop talking to her friend about the fight and I finally asked her to go see the vice principal and on her way out she said, “Mr. you're racist”. Sometimes I feel like I'm the wrong color to work here. I can't relate to these kids and they don't relate to me (Interview, April 2009)

Although Lamar wants to get his students excited about learning science, he clearly feels disconnected from the students and the community culture. Statements such as “sometimes I feel like I am the wrong color to work here” express his discomfort with being the minority amongst his students. The pressures of high-stakes assessments change his initial belief that a science teacher is one who helps students explore:

School cultural conflict.

I need to learn how to cover the material in a way that interests these students. I have to learn to think like they do. I wanted to set up some inquiry-based projects for the students like taking apart a computer and figuring out how it works but there is no time. I have to cover material up to chapter six before the winter break. I have to lecture for the majority of the period so the students can take notes because there are not enough books for every student. Because we are an under performing school we are mandated to follow strict

curricular guidelines. I have no freedom for creativity. (Dinner Club Field Notes, November 2008)

Often novices believe following strict curricular guidelines means little or no creativity in their teaching, and they are required to cover vast amounts of material through lecture and worksheets. Lamar's cultural conflict with the school has convinced him that he is disconnected from the students and his primary job is to deliver information. In many ways he has lost sight of his initial reason for becoming a teacher, teaching students the value of exploring. During one of the observation periods, Lamar lectured for twenty-minutes on the digestive system and provided a fifteen-minute activity worksheet related to the digestive system. During this lesson there were constant disturbances. Students were talking in small groups about non-science related topics and or dismantling any object they could find in the class. After the lesson Lamar spoke briefly about the students' lack of involvement in the lesson:

Local community cultural conflict.

What you just saw is why I need ideas. They are bored and uninterested in what I'm doing. I need to learn the tricks of the trade. I want them to have a better experience in science class. I want the lessons to be relevant to their lives, but these kids don't see "science" in their communities. It's not safe for them to explore their surroundings. My perception of urban communities is a place with a large population of low income Black, Hispanic, and recent immigrant families, the students are usually from single parent homes and parents don't have high expectations of their kids and don't see the point of academics. Most are not familiar with outdoors or the natural world and are use to violence in their daily lives. I don't think this as an adequate environment to explore. (Post-observation, December 2008)

It takes a whole village to raise a child," according to the African proverb that has become popular among educators. Presumably the child referred to might be educationally disadvantaged, low income, and a student of color not just one fortunate enough to be raised in exemplary circumstances. As an urban educator, Lamar did not subscribe to the principle that all children have a right to a decent education. James, Lamar, and Velma were not willing to accept their role as a resident of the village and prepare their students accordingly. Due to their tri-cultural conflict they were merely occasional visitors with a shallow tourist's understanding of the village and its children.

The data illustrates a conflicting relationship between the culture of the school and the local community with the novice teacher's self-concept and values of how to meet the needs of students. For Lamar, James and Velma, mandated curriculum, high- stakes assessments, and poor perceptions and relationships with students and parents have a negative impact on their self-concept as teachers. Their negative descriptions of working with students, parents and community members illustrate their insecure relationship with working in an urban district. All three-focus teachers were unable to negotiate the cultural spheres of socialization and as a result are consciously and unconsciously reinforcing the power structure of white upper -middle class America. Unfortunately, this country has yet to produce a system of teacher education that successfully, and in sufficient numbers, prepares teachers for effective work in diverse urban school settings (Darling-Hammond, 1994). Despite the standards movement, teachers of students

from poverty need more than a good grasp of content knowledge (Leland & Harste, 2005). They need to be able to understand and negotiate the cultural spheres of urban teacher socialization. Freire (1998) wrote,

I am not angry with people who think pessimistically. But I am sad because for me they have lost their place in history. There is a lot of fatalism around us, which insists that we can do nothing to change the march of social-historical and cultural reality because that is how the world is
(p.26-27)

School leaders can play a key role in helping urban novice understand the importance of their work and learn how to negotiate the cultural realities of urban teaching, once they are able to internalize that things are challenging largely because they are unfamiliar they will have the ability to intervene and improve the situation. “This attitude is not developed overnight or in the safety of a college classroom. It is the product of inner struggle, self-interrogation, and the realization that anyone can grow into a new kind of person” ((Leland & Harste, p.76). School leaders need to acknowledge this occurrence and help new teachers develop strategies to negotiate these three unique cultures.

Conclusion

The relationships among the themes identified in this study are complex. Further research is needed to better understand these relationships and specific strategies for school leaders to implement. The information provided through the narratives reveals the importance of novice having a forum to voice their concerns. Urban school administrators can play an integral role in providing these forums. Urban districts leaders should provide opportunities for novice teachers to dialogue with other educator and work through the cultural socialization spheres in a safe supportive environment. Developing such relationships could also be supported through participation from university teacher preparation programs, urban districts, and local communities. Educational legislation related to accountability pressures is an increasingly powerful force in urban schools. Beginning teachers need to understand their rights and responsibilities and have opportunities to voice their frustration as well as develop strategies to navigate through the requirements of common core based education. In addition these areas need to be examined in relationship to teacher retention in urban districts.

This study is significant for several reasons. First, it represents the initial steps in research exploring the cultural contexts on urban novice science educators. Next, it is essential for teachers to understand the impact of teaching in an environment that is different from their own. It is also valuable for school leaders to understand the importance of helping novice teachers create a cultural balance during the induction phase of their profession. With a better understanding of the cultural contexts of teaching we can help promote the professional and personal well being of beginning urban science teachers.

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