Available online at www.sciencedirect.com
ScienceDirect
Teaching and Teacher Education 23 (2007) 653–663
TEACHING AND TEACHER EDUCATION
www.elsevier.com/locate/tate

The impact of a field immersion program on pre-service teachers' attitudes toward teaching in culturally diverse classrooms

Robert A. Wiggins*, Eric J. Follo, Mary B. Eberly

Oakland University, 415D Pawley Hall, Rochester, MI 48309, USA

Abstract

Understanding of community, and a positive attitude toward cultural diversity are critical components in the preparation of teachers. This study sought to influence both, through on-site coursework and a long-term field placement at a culturally diverse urban elementary school. Participants were predominately single, white females from suburban communities. Questionnaire responses suggest that this immersion program improved the attitudes of these pre-service teachers. Findings support the idea that a targeted field placement, support from peers and teachers, and meaningful coursework facilitates the preparation of culturally responsive teachers—even for those with little or no prior experience in culturally diverse communities.

Keywords: Cultural diversity; Field experience; Pre-service teachers

1. Introduction

The changing demographics of public schools in the United States have prompted teacher preparation programs to give increased attention to the multicultural awareness of prospective teachers. In response to this demographic shift, many institutions have developed courses and expanded field placements—especially for the preparation of elementary teachers—that address this issue. Oakland University is no exception. Our campus is located near two urban, culturally diverse cities. Therefore the preparation of teachers for urban classrooms is a key part of our mission. For over a decade, two courses in our elementary education program have included a unit on cultural diversity. Our majors have an early field experience every semester they are enrolled and we have required that at least two field experiences (minimum 3 h/week over 10 weeks) in urban, culturally diverse schools. However, simply having coursework and field experiences may not result in adequate awareness of the issues surrounding teaching in a culturally diverse classroom. One purpose of the present study was to describe the degree to which pre-service teachers' comfort level in culturally diverse urban classrooms changed as a function of the nature and length of a specifically designed field experience.

To determine whether our program was developing positive dispositions towards cultural diversity, we conducted a study (Wiggins & Follo, 1999) in which the multicultural readiness of our elementary education students was examined using three dimensions proposed by Powell, Zehm, and Garcia (1996). Each dimension represents a specific

*Corresponding author.
E-mail address: wiggins@oakland.edu (R.A. Wiggins).

0742-051X/$ - see front matter © 2007 Published by Elsevier Ltd.
doi:10.1016/j.tate.2007.02.007

construct that contributes to readiness to teach in culturally diverse classrooms: factors that foster, factors that constrain, and experiences that contribute to successfully teaching culturally diverse groups of students. Factors that foster or constrain readiness concern dispositions associated with the level of acceptance and appreciation of cultural differences that may impact the learning environment. Experiences that contribute to successful teaching are those that provide students with opportunities to gain understanding and become familiar with a culture other than their own. The interrelatedness of these three constructs provides a holistic picture of students' cultural competence. A lack of understanding of cultural diversity on the part of teachers can inhibit the growth of students whereas an appreciation of these differences promotes an optimal learning environment. Attitudinal changes of pre-service teachers were investigated at a number of points in our elementary teacher education program. Although our students developed knowledge and skills related to teaching in culturally diverse classrooms, they continued to feel uncomfortable interacting with individuals who were ethnically or culturally different from themselves. The results of our earlier study provided clear indications that we needed to enhance the experiences that our students have in culturally diverse schools and classrooms.

Consistent with other research on this issue (c.f. Grant, 1994; Ladson-Billings, 2000; Sleeter, 2001) we concluded that these experiences might do more harm than good if they reinforce existing negative stereotypes rather than dispel them. Solidified negative stereotypes are likely to result when students are simply present in field placement classrooms attending only to academic issues without gaining an understanding of or appreciation for the cultural norms of the school and community. We decided that we needed to go beyond simple field placements and immerse our students in the cultural life of the school. However, there is disagreement in the literature about what form immersion should take and whether it is even possible to prepare outsiders in large numbers to be successful in urban, culturally diverse classrooms (Buckley-Van Hoek, Kasten, Keenan, & Adeeb, 1998; Clarken & Hirsat, 1992; Grant, 1994; Seidl & Friend, 2002). Thus, a second purpose of the present study was to extend our previous work by investigating the impact that greater exposure to multicultural classrooms might have on pre-service teachers' comfort in those settings. Specifically, our study addressed three issues: (1) the interrelationship among the constructs foster, constraint, and experience and whether they represent differing aspects of cultural competence, (2) a comparison of pre-service teachers in two field experiences with practicing substitute teachers who had extensive experience in an urban setting to determine whether university experiences can be comparable to "real-life" experiences, and (3) whether students' attitude toward cultural diversity change through differing experiences across time.

The conceptual framework for our study is similar to that proposed by Powell et al. (1996) in that it is based on the belief that students need opportunities for self-reflection if they are to change their dispositions toward teaching in culturally diverse classrooms. The term "dispositions" has been given much attention in recent years since the assessment of students' dispositions is now part of the accreditation process for many schools of education in the United States (NCATE, 2002). Some of the most significant work in teacher dispositions has evolved from the work of Arthur Combs at the University of Florida on perceptions. Building on Comb's work, Usher (2002) has provided insight into the nature of dispositions. He proposes that dispositions are not behaviors, but can be determinants of behavior. "They do not exist as distinct entities of actions or thoughts, or traits. Rather, they represent the ways in which an individual has stocked, structured and ordered his or her psyche or mind; … They are constellations of personal meanings from which behaviors spring and thus they do determine the probability of effectiveness for one's professional choices and behaviors" (Usher, 2002).

If dispositions are, indeed, determinants of behavior, any assessment of student dispositions needs to at least consider how students think they will respond in situations where they must make professional decisions based on their personal belief structures. With that in mind, students' self-reflection will have the greatest impact if it occurs in a real-life context. We agree with Powell et al. (1996) that students need extensive experiences in culturally diverse schools including "focused observations of classroom teaching, interviews and conversations with experienced educators, collaborative site-based teacher research projects, and reflective thinking about cultural diversity in schools" (p. 8). Without these experiences we

cannot expect any learning about cultural diversity to be meaningful for our students. For the present study we tried to create a setting in which students were able to engage in a common experience with a variety of cooperating teachers over an extended period of time and support this experience with a direct connection to professional courses taught on site.

2. Literature review

2.1. Characteristics of the candidate pool

The US Department of Education (1998) has emphasized the need for teachers who are prepared to teach diverse student populations in urban settings because of the increasing diversity of the K–12 student population (Hobbs & Stoops, 2002; US Census Bureau). Haberman (1996) suggests that for urban schools "the best and brightest teachers are not 25-year-old females from small towns or suburbs with high GPAs who 'always wanted to teach' (p. 755). Rather they are those who come from the same cultural and socio-economic setting as urban students themselves. Urban school district reports, however, show decreases in both the size and the quality of their pools of applicants for teaching positions (Krei, 1998). The urban teacher shortage is even more critical than the overall teacher shortage that has been documented for the past several years and predicted to continue for the next two decades (Gerald & Husser, 1990; Lewis, 1996). As the pool of teacher candidates continues to shrink, the dramatic decline of candidates from urban communities results in a work force that is becoming dominated by white, upper-middle-class females (Cardina & Roden, 1998; Hodgkinson, 2002). Thus, the urban schools of the United States face a dilemma. If urban students are not inclined to become teachers, where will the teachers come from who are well prepared to teach urban students? Will they be teachers who have the commitment to engage in the community, take an activist stance (Oakes, Franke, Quartz, & Rogers, 2002) and be agents of change for urban school reform? These questions prompted an investigation to determine whether white, upper-middle-class females can be assisted in developing the dispositions needed to successfully teach in a culturally diverse setting and determine how their preparation compares to individuals who are from the same culture as their students and have spent time in urban schools. To do this we needed to provide future teachers with knowledge, attitudes and skills and give them intensive realistic field experiences (Breault, 1995; Gay, 2002).

2.2. The nature of field experiences

Field experiences have not enjoyed high priority in teacher preparation programs. Too often they are limited to occasional observation or involve cursory reflection on a broad spectrum of issues that is sporadic and unfocused (Villegas & Lucas, 2002). Zeichner (1993) criticizes field experiences for frequently being too brief and not demonstrating that the students are able to apply what they have learned. Yet field experiences may be among the most effective methods for achieving the goal of cultural sensitivity, especially when coupled with supportive course work (Gomez, 1996; Pohan, 1996). To better prepare culturally responsive teachers Villegas and Lucas (2002) suggest a program that includes a better understanding the lives of students of diverse backgrounds (see also, Morales, 2000). Because of the nature of most field experiences, it is important to determine whether the experience fosters readiness, or actually contributes to the constraints that impede effective teaching in culturally diverse classrooms.

3. Method

We implemented a program that we believed would increase the likelihood that culturally naïve, white, suburban females would develop the dispositions to successfully teach in culturally diverse classrooms. Named the Frost Immersion Program, it provided students with the opportunity to be immersed in a school and community. As our earlier study indicated, the typical student in our program has little prior experience with cultural diversity. Our goal for the present investigation was to assess the impact of this program on student multicultural attitudes.

3.1. Participants

Participants ($n = 62$) in the present study were either pre-service teachers or substitute teachers. The pre-services teachers (female, $n = 44$; male $n = 3$) were volunteers interested in the urban education immersion pilot program and at the mid-point of the elementary education degree. On

average, the participants were 23 years of age with two students who were 26 and seven students in the 30s. With the exception of one individual, the participants were white, middle class students. One was an African American from a lower income family. Twenty-four of the students were in the fourth year of a 5-year teacher certification program, eighteen were third year students, one was a second-year student and four were second-degree students. All had achieved a 3.0 grade point average (GPA) or better which is equivalent to a B− in the United States system. Some programs in the United States admit students with a lower GPA; however, these students were typical of those admitted to the program at Oakland University. Demographically, these participants mirrored the larger population of our elementary education majors.

The substitute teachers were from the school district in which the study took place and enrolled in our alternative certification program leading to full teacher certification. They were recruited as a comparison group (female, $n = 12$; male $n = 3$). In contrast to the pre-service teachers, these students were predominately African Americans with only 3 European Americans in the group. They ranged in age between 30 and 48. All had bachelor's degrees, at least 3 years experience in the school district, and extensive life experience living and working in an urban setting.

3.2. Group settings

The pre-service students participated in one of two conditions. Group A ($n = 23$) consisted of the first enrollees in the Frost Immersion Program. They had three courses taught at Frost Elementary School in the winter semester. The courses chosen addressed philosophy of education, instructional design, and student/teacher classroom interaction. One course specifically included a strong component on meeting the needs of students with diverse cultural and ethnic backgrounds. These students were each placed with a classroom teacher for 30 h of field experience over the course of the semester. They observed the teacher, taught occasional lessons, worked with small groups or individual pupils providing instructional assistance. Their field experience was similar to that of other students in our program, however, they had the added benefit of being able to reflect and share ideas with classmates who were in the same school and with professors who new the setting very well.

The following year the program was extended to a second cohort of students. Group B ($n = 24$) enrolled in four courses (the Group A courses plus a learning theory course) taught over two semesters. The intention was for these students to spend more time in the school setting than Group A. They were also placed in classrooms for 30 h each semester giving them a minimum total of 60 h with their teacher. Another difference for the Group B students was that they were also required to attended faculty meetings, Parent Teacher Association meetings, and parent–teacher conferences. They were at the school at least 3 full days a week. As a natural consequence of the additional time they spent at the school, most ate lunch in the faculty room with the regular teachers, which gave them another insight into the culture of the school. Thus, when they reflected or had questions about what they observed, they had a number of ways to seek resolution: like their counterparts in Group A, they could have a personal conference with a professor who was readily available and knew the situation very well; they could raise an issue in class and discuss it with peers who were in the same field setting; they could interact with this "community of learners" informally outside the class; they could seek the advice of experienced teachers over lunch; or they could raise a question at a faculty meeting. Having course instructors on site meant that the instructors talked to teachers, attended school meetings along with their students, observed in classrooms, and interacted with parents. This allowed the instructors to incorporate the field work more directly into their courses giving the students the opportunity to articulate their concerns and reflect on the interpretations they gave to certain classroom incidents under the guidance of a more experienced mentor.

In addition, Frost Elementary School had received a federal grant for a tutoring program and was also partnering with a community service agency that funded a full-time parent assistance and education office in the school. This agency offered weekly parent education classes, sponsored special events, and later operated a summer camp at the school. Students in Group B worked with the tutors and were required to assist with the parent education classes periodically throughout the year. These classes were often preceded by a potluck supper so the students got to interact with parents and children in a less formal setting as well. Most field placement students form a bond with their

pupils even when they are only there for 30 h. Through the experiences of the Frost Immersion Program, these pre-service teachers became better acquainted with the teachers, parents and the community. In short, they gradually came to be thought of as part of the school staff.

Group C ($n = 15$) was the post-test comparison group of permanent substitute teachers.

3.3. Procedure

Students in Groups A and B completed a questionnaire at the beginning of the immersion field experience. This pre-test was administered to assess their attitudes about teaching in multicultural settings. At the end of the experience, the questionnaire was again administered to Groups A and B and to Group C for the first time. Responses were coded to maintain anonymity.

3.4. Instrument

Readiness for and experience with multicultural classrooms was assessed by adapting the "activities for assessing and developing readiness" outlined by Powell et al. (1996, pp. 72–76). Powell, Zehm and Garcia developed these activities based on the work of a number of other researchers (see notes 14 and 15 on p. 81 of their work for additional references). Our questionnaire employed the adapted statements as items to which students responded using a 1–5 (strongly disagree–strongly agree) Likert scale. Students were asked to indicate the degree to which they agreed or disagreed with 34 statements that reflected (a) factors that foster readiness for teaching in a culturally diverse setting (Foster), that is, awareness, understanding, and knowledge of diversity issues; (b) factors that constrain readiness for teaching (Constrain), that is, aspects that inhibit cultural sensitivity and student engagement; and (c) prior experience with cultural diversity (Experience).

The three categories in which the 34 statements are grouped are consistent with the premise that students need to reflect on their personal beliefs or dispositions if they are to develop an awareness of how this affects their actions. Powell et al. (1996) make this clear in their directions to the reader. For factors that foster readiness, that indicate that "(w)hen you develop these factors in yourself, you then have a personal knowledge base for making classroom decisions about your teaching actions" (p. 72). In contrast, they point out that factors that constrain readiness "may lead you to develop strategies that lack the kind of cultural sensitivity needed to openly invite your students to engage meaningfully in your lessons" (p. 73). Finally, reflecting on the nature of personal experiences allows an individual to "determine any additional experiences you may need to strengthen your multicultural awareness" (p. 74).

Each time we used the questionnaire with the students in our program we found a strong relationship among the statements in each category. In the present study Cronbach alphas were used to determine the internal consistency of each scale. The Cronbach alphas for each of the subscales at the pre- and post-test administrations were as follows: Foster $\alpha = 0.78$ (pre-test), $\alpha = 0.81$ (post-test); Constrain $\alpha = 0.69$ (pre-test); $\alpha = 0.69$ post-test; and Experience $\alpha = 0.82$ (pre-test); $\alpha = 0.87$ (post-test).

4. Plan of analysis

Statistical analyses were employed to address several objectives in the present study. The first objective was to examine the ways in which the subscales (Foster, Constrain, and Experience) were interrelated. Methodologically, examining the interrelationships among the subscales at the pre-test and post-test administrations allows for an understanding of the degree to which the subscales tap similar underlying constructs. By examining the relationship between pre-test and post-test administrations, we were able to establish the stability of the participants' responses across time.

Our second objective was to examine whether each groups' participants differed in their attitudes toward teaching in a multicultural setting. First, we established a baseline measure for each group (pre-test), and determined whether differences existed for each subscale between Groups A and B. To further understand the meaning of the subscale differences, we examined the differences between groups on individual items. Similarly, we determined whether differences emerged among the three groups at the post-test administration. Our goal was to examine whether the differences that emerged during the post-test administration were the same as those found during the pre-test.

The third objective was to investigate whether group participants' attitudes changed between the pre-test and post-test administrations. In

conducting these analyses, we were able to determine the effectiveness of the program on students' attitudes about teaching in a multicultural setting. In addition, we investigated which group showed the most change across time by subtracting the post-test score from the pre-test score resulting in a difference score. Thereafter, we examined which Group (A or B) had the greater difference score between the pre-test and post-test. We reasoned that the greater the difference score the greater effect that the program had on student attitudes.

5. Results

5.1. Relationship among subscales

In order to examine the interrelationships among the Foster, Constrain, and Experience subscales, Pearson correlations coefficients were employed. At Time 1 (pre-test), the Fostering subscale and Experience subscale were significantly and positively correlated, ($r = 0.53$, $p < 0.01$). This finding indicates that the more the students reported having experience, the more they perceived themselves as being able to provide a positive classroom experience in a culturally diverse setting. At Time 2 (post-test), Fostering was correlated significantly and positively to Constraining ($r = 0.42$, $p < 0.01$) and Experience ($r = 0.68$, $p < 0.01$). As in Time 1 a link was found between experience and the ability to foster. In addition, the more students perceive themselves as able to foster a supportive classroom, the more they recognize the constraints involved. Across time, the pre-test and post-test Constraining subscale correlated positively ($r = 0.49$, $p < 0.01$), as did the pre-test and post-test Fostering subscale ($r = 0.40$, $p < 0.01$). These pre- and post-test results demonstrate the consistency of student reports across time.

5.2. Differences among pre-test groups

A one-way MANOVA was conducted to examine whether statistically significant differences existed among pretest groups (Group A: one semester experience; Group B: two semester experience; Group C: comparison group) for the Foster, Constrain, and Experience subscales. An Omnibus F test was used to determine the overall likelihood that statistically significant mean differences occurred within the data taking into account the pre-existing correlation among Constrain, Experience, and Foster subscales. When dependent variables are correlated (that is, the subscales), an IV (treatment group) that affects one surely will affect another; they are not independent, and consequently, the likelihood of finding significant differences become inflated and, therefore, not 'real'. Wilk's Lamda compares resulting or observed mean vectors with those assumed to be true of the population (Tabachnick & Fidell, 1996). The Omnibus F test (Wilk's Lambda) resulting from the MANOVA uncovered a significant difference among groups $F(6, 112) = 2.79$, $p < 0.02$. Univariate analyses (or ANOVAs) revealed a significant main effect for Foster $R^2 = 0.16$, $F(2, 58) = 5.65$, $p < 0.01$, in which members of the Group C (Comparison group) had significantly higher scores than students who were enrolled in Group B (see Table 1).

Using a series of one-way ANOVAs, individual sub scale items were examined. Results showed that, for the Foster subscale items, members of Group C were significantly more comfortable teaching and engaging in parent interaction in a multicultural setting than students in Group A or B. Members of Group B were least able to explain ways in which culture enhances student learning. Group A reported greater comfort in their ability to develop strategies for increasing students' self-confidence than did Group B. Only one item on the Constrain subscale showed a significant difference; members of Group B reported greater preference for teaching students of the same socioeconomic status and

Table 1
Mean pretest scores by category and group

Subscale/item content	Group A ($n = 23$)	Group B ($n = 24$)	t
Foster	35.8a	32.4b	2.23*
10 Explain cultural enhancement to learning	3.4a	2.5b	2.82**
27 Able to tailor instruction to student needs	3.4a	2.8b	2.29*
29 Strategy development for student confidence	2.8a	3.2b	4.14*
Constraint	27.6	25.3	1.48
19 Preference for similar SES and culture	3.22a	2.38b	2.66**
Experience	45.3a	41.0b	2.07*

Note: Different letters in each row denote significant mean differences. For complete item, see Powell, Zehm, and Garcia (1996).

$^{+}p < 0.10$; *$p < 0.05$; **$p < 0.01$.

background than did Group A. One item revealed a significant difference for the Experience subscale indicated that members of Group C were more comfortable teaching in a multicultural setting than members of Group B. Table 1 presents means of items showing significant differences. In short, at the pre-test administration, members of Group B reported the lowest affinity for teaching in a culturally diverse setting.

5.3. Differences among post-test groups

A one-way MANOVA, for which group membership was the independent variable, also was calculated to examine the ways in which the three members of the three groups differed after participating in their field experiences. The Omnibus F test (Wilk's Lambda) resulting from the MANOVA revealed a significant main effect $F(6, 104) = 5.23$, $p < 0.0001$. Univariate analyses (or ANOVAs) for each subscale showed significant group differences for the post-test Experience, $R^2 = 0.32$, $F(2, 54) = 12.60$, $p < 0.0001$. Both Groups A and B students had significantly higher scores than Group C on the Experience subscale (see Table 2).

Individual items on each subscale were examined more closely using ANOVAs (see Table 2 for items having significant mean differences). For items in the Foster subscale, results revealed that the members of Group B and Group C were not significantly different from one another in their comfort in teaching in a multicultural classroom or interacting with parents, yet both groups had significantly higher mean scores than Group A for those items. In addition, the participants in Group B rated their ability to design and implement appropriate lessons and to develop strategies to enhance student self-confidence higher than did Group C. No differences were present between Groups B and A on those items. For items on the Constrain subscale, members of Group A believed that there were more problems than assets in a multicultural classroom than members of Group B or Group C. For items on the Experience subscale, members of Group A and Group B rated the following items higher than members of Group C: understanding of multicultural education; identifying bias in teaching, curricula, and tests; and engaging in discussion on adapting teaching to learning styles.

Table 2
Mean post-test scores by category and group

Subscale/item content	Group A ($n = 23$)	Group B ($n = 24$)	Group C ($n = 15$)	F
Foster	39.7	43.1	38.7	2.49
5 Comfort with teaching multicultural classroom	3.6b	4.4a	4.3a	6.10**
6 Comfort with Parent interaction	3.3b	4.0ab	4.1a	5.14**
28 Able to design & implement appropriate lessons	3.7ab	4.0a	3.1b	3.01+
29 Able to develop strategies for student confidence	4.0ab	4.3a	3.4b	4.99**
Constraint	36.7	37.1	36.6	0.03
32 Belief in more problems than assets in multicultural classrooms	4.0a	3.1b	3.2ab	4.62**
Experience	55.6a	59.0a	45.7b	12.60***
4 Know what multicultural education means	4.5ab	4.8a	3.9b	5.16**
11 Participated in projects that made clear teaching and student self esteem	3.7a	4.3a	2.8b	9.41***
14 Received instruction for multicultural teaching	3.3ab	4.0a	2.7b	6.34**
15 Examined school curriculum (& books) for bias	4.3a	4.3a	2.7b	13.34***
16 Examined tests for bias	4.5a	4.7a	2.5b	28.32***
17 Discussed relationship between hidden curricula and unintentional bias	3.9a	3.8a	2.0b	13.94***
20 Completed projects that included aspects of multiculturalism	3.5ab	4.1a	2.9b	4.80*
30 Discussion on adapting teaching to learning styles	3.9a	4.5a	3.1b	10.98***
38 Comfortable raising questions about multiculturalism in university settings	4.5ab	4.8a	3.9b	5.16**

Note: Different letters in each row denote significant mean differences. For complete item, see Powell, Zehm, and Garcia (1996).
+ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

5.4. Differences across time by student group

In order to examine changes in perception between groups across time, we used a 2 ($\times 2$) Mixed Factorial MANOVA, where the between factor was group[1] and the within factor was the time of testing. The Omnibus F test (Wilk's Lambda) revealed a group $\times$ time interaction for between effects (that is, effects between the groups) $F(3, 43) = 3.43$, $p < 0.05$ and a group $\times$ time interaction for within effects (that is, effects across time) $F(3, 39) = 5.45$, $p < 0.01$. A significant main effect was found for time $F(3, 39) = 52.57$, $p < 0.01$.

The univariate analyses revealed a group $\times$ time effect for the within effects $F(1, 41) = 15.09$, $p < 0.001$ and for the between effects $F(1, 41) = 5.12$, $p < 0.05$ of the Fostering subscale. Using least squared means post-hoc test of significance, post-test scores for Group A and Group B students were significantly higher than pre-test scores and Group B students had significantly higher scores than Group A on the post-test (see Table 3). Similar results were obtained for the Experience subscale (within effects: $F(1, 41) = 9.82$, $p < 0.01$; between effects: $F(1, 41) = 6.45$, $p < 0.02$). Post-hoc analyses showed that although pre-test scores for Group B students were significantly lower than pre-test scores for Group A, both groups changed significantly over time and showed no significant difference in post-test scores. A significant main effect was revealed for Constrain $F(1, 41) = 19.08$, $p < 0.001$, for which Time 2 scores were significantly less than Time 1 scores.

5.5. Differences in amount of change

In order to determine which group experienced the greatest degree of change across time, pre-test scores were subtracted from post-test scores on each of the subscales resulting in a difference-score. Subsequently, T-tests were performed using the difference scores. Results showed no significant difference in the amount of change between Groups A and B for Constrain. Significant differences in degree of change were present for Foster $t(41) = 3.88$, $p < 0.001$ and Experience $t(41) = 3.13$, $p < 0.01$. Group B students showed a greater change in scores (Foster: $M = 10.5$; Experience $M = 17.85$) than did Group A (Foster: $M = 3.96$; Experience: $M = 9.96$).

[1]The Group 3 was dropped from the analysis because only post-test data were gathered from these participants.

Table 3
Mean scores for the Foster, Constraint, and Experience subscales across time by student group

Subscale/group	Pre-test	Post-test
Foster		
Group A ($n = 23$)	35.8a	39.7b
Group B ($n = 24$)	32.4a	43.1c
Experience		
Group A	45.6a	55.6c
Group B	41.4b	59.0c

Note: Within each subscale, different letters denote significant mean differences.

6. Discussion

In our earlier study, our intention was to identify the nature of our students' understanding of the issues involved in teaching in culturally diverse classrooms. We found that there was a serious disconnect between our students' intellectual capability, belief structures, and their actual willingness to teach in culturally diverse settings (Wiggins & Follo, 1999). Extant research views such findings as inevitable and impossible to mitigate. Moreover, some educators have espoused the view that the most appropriate teachers for culturally diverse classrooms are those individuals who are raised in, and closely connected to those communities (Grant, 1994; Ladson-Billings, 1994). Even if we accept this argument in theory, it leaves us with no practical means to remedy the lack of teachers for urban schools. Because there is still a shortage of teacher candidates from urban centers, a parallel solution to the problem of cultural mismatch may be to better prepare the students we have currently (Bondy & Davis, 2000).

We also hold strong to our conviction that the single, white, suburban, females who make up 94% of our elementary teacher education program need to develop greater cultural sensitivity even if that does not translate into a commitment to teach in urban, culturally diverse classrooms. To that end, we need to develop a model of experiences that contribute to an attitude change in our students. Our first study (Wiggins & Follo, 1999) revealed that field experiences in culturally diverse urban classrooms generated both positive and negative change in our students' attitude and commitment to

teaching in those settings. It was clear that for each student who developed a positive attitude towards teaching in a culturally diverse classroom, there was another who felt increasingly uncomfortable in that setting. Our objective for the present study was to determine whether we could enhance the circumstances that are likely to result in a positive attitude change for a larger number of students. A number of aspects of the field placement in the Frost Immersion Program were intended to contribute to this change. The connection between the coursework and the field experience created a more meaningful learning environment. Initial teacher training programs in the United States are not uniform. Typically, pre-service teachers in the United States have early field placements prior to full-time student teaching: whether those experiences are directly connected to the accompanying coursework varies by academic program. Moreover early field experiences are typically short in duration averaging approximately 2 or 3 h/week with students assigned to many different schools. In contrast, this program provided a direct connection between the coursework by having class sessions at the schools and the field experiences in the same school. As a result, students spent additional time in the school over a single 4-month semester for Group A and two semesters for Group B. The increased amount of time the pre-service teachers spent in the setting led to greater involvement with parents and students in the community. This involvement gave them the opportunity to get to know the parents and see their students in a different context. This study demonstrates the benefit of more school/community involvement at an early stage in their pre-service preparation. Two of the authors have been involved as instructors at other times for courses that were taught on site. Attempts were made to connect those courses more directly to the field experiences through journals and reflective discussions. However, it has been our experience that even when the course is on site, if the field is confined to classroom events, students may not get a sense of their place as teacher in the culturally diverse community.

To confirm the impact of this immersion program we used a pre-test/post-test design to measure our students' dispositions about teaching in culturally diverse communities. Unlike our initial study, the present study included data from Group C—individuals who had been immersed in the urban school setting for a substantial portion of their lives as either students or employees. We considered the responses given by Group C to be a reasonable representation of individuals who are comfortable in an urban setting; that is, those who have been part of the school district culture for an extended time as children, adults and employee. Yet, like our other subjects, they too have the goal of becoming certified teachers. Our conclusions are premised on the idea that we could consider our program successful if our uninitiated students (Groups A and B) resemble students with extensive community experience (Group C). We found that the two experimental groups were able to reach that measure of success.

Our first finding was that the subscales were interrelated indicating that all three were measuring a similar underlying construct: attitudes toward teaching in multicultural classrooms. A second finding was that, at least in the Fostering and Constraining subscales, the rank order of students' attitudes remained relatively stable over time. This would indicate that when change occurs we should expect that change to be incremental and relative to each individual. Most importantly, our third finding shows that change in a student's perception of the issues in multicultural classrooms is possible depending on the nature of the student's field experience. Students in the yearlong experience (Group B) showed greater change. The yearlong group had the lowest overall score in the beginning of the study strongly indicating that they wanted to work in mono-cultural schools. In most areas, they had the highest scores at the end of the experience. Groups A and B both benefited from the intense field experience. They developed attitudes about working in culturally diverse classrooms that were as positive as those of the comparison group.

7. Conclusion

Participation in the Frost Immersion Program has made a difference for our students. They related that they became comfortable teaching students from a culture other than their own. If their perception is accurate, this comfort level will help them become better teachers regardless of where they choose to teach. We acknowledge that our sample size is small and that our data source is limited, so we cannot draw conclusions about the generalizability of this program to any other situation. We also do not know the strength of our student's convictions. It is possible that future

experiences in other classrooms will cause them to revert to their earlier views. Likewise, we cannot draw any conclusions about the ultimate impact of this program on developing teachers' commitment to urban education. We have not examined every aspect of what it takes to be a successful teacher in a culturally diverse urban setting. There may be characteristics of the Group C students that impact not only their disposition to teach, but also their commitment and potential for success as urban teachers. We did not attempt to investigate these characteristics in the Group A and Group B students. As Weiner (2000) points out, it is likely that any individuals' commitment to urban teaching is influenced as much by the politics and bureaucracy of large city school systems as it is by the teacher's disposition toward students.

We also acknowledge that the students in this program voluntarily chose to participate and were not randomly selected. Yet, there were clear indications that this self-selection process did not skew the sample with students who were already experienced and comfortable in a culturally diverse, urban school. Our data confirms our informal observations that the students who participated in the Frost Immersion Program began their classes apprehensive about this experience. As a result of their participation, our students developed a deeper understanding of the students, the community, and the personal attributes they need to be successful teachers in this setting. By the end of the one semester experience, and even more so by the end of the two semester experience for those in the extended program, these students were moving comfortably among students, teachers and parents in a culturally diverse urban school. They had become involved in the life of this school. We saw the kind of transformation we look for in a successful student teaching experience. These students had it in their second year courses. What is most important and gratifying to us is that they had this transformation in a setting they had previous viewed as foreign and impenetrable.

The problem of a cultural mismatch between teacher and students is not unique to the United States. Countries all over the world are dealing with changing norms generated by populations that are increasingly multicultural. Whether cultural pluralism is indigenous, such as the Maori culture in Aotearoa or New Zealand; longstanding, such as the Pakistani and Indian culture in England and the African–American culture in the United States; or relatively recent, such as Serbian and Bosnian immigration in Norway and Sweden, the need to understand underlying community norms is critical to creating successful learning experiences for all of our students. We suspect that school systems everywhere are confronting this problem and hopefully, there are some aspects of our experience that would be transferable to other settings for those seeking to resolve the same dilemma.

Realistically, we recognize that the political climate and the assumptions that the mainstream culture makes about the function and purpose of schooling sometimes is at odds with our efforts to address multicultural issues. In the United State there is a small, but ever-present movement against cultural pluralism. We recognize that there are also logistical and financial obstacles to implementing this approach to field experiences with large numbers of candidates while providing the intimacy students need if they are to feel they have become a genuine part of the school. However, we are encouraged by our findings and believe that our success in changing the attitudes of a homogeneous group of students makes it is worth the effort to continue. We had intended to gather additional quantitative data and supplement that with a more thorough qualitative case study to have a better sense of what a program such as this one means to pre-service teachers. Finally, we recognize that, at present, the questionnaire we used is not adequate for providing any predictive validity. This was a preliminary attempt to describe pre-service teacher awareness and comfort with teaching in a multicultural classroom. Unfortunately, Frost Elementary School was closed by the school district at the end of our study year despite having become one of the more successful elementary schools in the district. This may be one more indication of the role that politics and financial issues have on the lives of students and teachers in urban schools.

We hope to find a new location to continue our work. In designing a new study, we have confidence in the measure we used for assessing student attitudes as it provided useful data that allowed us to assess change over time that was prompted by a specific learning experience. We can also see the value of comparing our results with results from other work examining student attitudes such as Bennett's ethnocentricity scale (Bennett, 1986) and with the work being done using cases to assess student dispositions (Wasicsko, 2002). Despite the limitations of this study, we are convinced that we

can prepare typical pre-service teacher candidates for meaningful careers in culturally diverse classrooms.

References

Bennett, M. J. (1986). A developmental approach to training for intercultural sensitivity. *International Journal of Intercultural Relation*, *10*(2), 179–196.

Bondy, E., & Davis, S. (2000). The caring of strangers: Insights from a field experience in a culturally unfamiliar community. *Action in Teacher Education*, *22*(2), 54–66.

Breault, R. A. (1995). Preparing preservice teachers for culturally diverse classrooms. *The Education Forum*, *59*, 265–275.

Buckley-Van Hoek, S., Kasten, K., Keenan, D., & Adeeb, P. (1998). *The school and beyond: The efficacy of early professional courses with field experiences for changing attitudes and beliefs*. Paper presented at the annual meeting of the American Association of Colleges for Teacher Education, New Orleans, LA.

Cardina, C. E., & Roden, J. K. (1998). Academic proficiency of students who reported intentions of majoring in education. *Journal of Teacher Education*, *49*(1), 38–46.

Clarken, R. H., & Hirsat, L. A. (1992). *Multicultural and global perspectives in teacher education*. Paper presented at the 72nd annual meeting of the Association of Teacher Educators, Orlando. FL. ERIC Document Reproduction Service no. ED 347 128.

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education*, *53*(2), 106–116.

Gerald, D. F., & Husser, W. J. (1990). *Projections of education statistics to 2001: An update*. Washington, DC: National Center for Education Statistics, US Department of Education. ERIC Documents ED327581.

Gomez, M. L. (1996). Prospective teachers' perspectives on teaching "Other People's Children". In K. Zeichner, S. Melnick, & M. L. Gomez (Eds.), *Currents of reform in prepservice teacher education*. New York: Teachers College, Columbia University.

Grant, C. A. (1994). Best practices in teacher preparation for urban schools: Lessons from the muticultural teacher education literature. *Action in Teacher Education*, *19*(3), 1–18.

Haberman, M. (1996). Selecting and preparing culturally competent teachers for urban schools. In Sikula, J. (Ed.), *Handbook of research on teacher education* (2nd ed., pp. 747–760). New York: Simon & Schuster Macmillan.

Hobbs, F. & Stoops, N. (2002). *Demographic Trends in the 20th Century*, U.S. Census Bureau, Census 2000 Special Reports, Series CENSR-4, U.S. Government Printing Office, Washington, DC.

Hodgkinson, H. (2002). Demographics and teacher education—An overview. *Journal of Teacher Education*, *53*(2), 102–105.

Krei, M. S. (1998). *Inequities in teacher allocation: Policy and practice in urban school districts*. ERIC Research Report ED421577.

Ladson-Billings, G. (1994). *The dreamkeepers: Successful teachers of African American children*. San Francisco: Jossey-Bass.

Ladson-Billings, G. (2000). Fighting for our lives: Preparing teachers to teach African American Students. *Journal of Teacher Education*, *51*(3), 206–214.

Lewis, M. S. (1996). Supply and demand of teachers of color. *Digest*. Washington, DC: ERIC Clearinghouse on Teaching and Teacher Education. February.

Morales, R. (2000). Effects of teacher preparation experiences and students' perceptions related to developmentally and culturally appropriate practices. *Action in Teacher Education*, *22*(2), 67–76.

NCATE. (2002). *Professional standards for the accreditation of schools, colleges, and departments of education*. Washington, DC: National Council for the Accreidation of Teacher Education.

Oakes, J., Franke, M. L., Quartz, K. H., & Rogers, J. (2002). Research for high-quality urban teaching: Defining it, developing it, assessing it. *Journal of Teacher Education*, *53*(3), 228–234.

Pohan, C. A. (1996). Preservice teachers' beliefs about diversity: Uncovering factors leading to multicultural responsiveness. *Equity and Excellence in Education*, *29*(3), 62–69.

Powell, R. R., Zehm, S., & Garcia, J. (1996). *Field experience: Strategies for exploring diversity in schools*. New Jersey: Prentice-Hall.

Seidl, B., & Friend, G. (2002). The unification of church and state: Working together to prepare teachers for diverse classrooms. *Journal of Teacher Education*, *53*(2), 142–152.

Sleeter, C. E. (2001). Preparing teachers for culturally diverse schools: Research and the overwhelming presence of whiteness. *Journal of Teacher Education*, *52*(2), 94–106.

Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics* (3rd ed). New York: Harper Collins.

US Department of Education. (1998). *A talented, dedicated, and well-prepared teacher in every classroom. US Department of Education initiative on teaching information kit*. Washington, DC: US Government Printing Office.

Usher, R. (2002). *Arthur Combs' five dimensions of helper belief reformulated as five dispositions of teacher effectiveness*. Paper presented at the symposium on educator dispositions pre-conference, Eastern Kentucky University, Richmond, KY.

Villegas, A. M., & Lucas, T. (2002). Preparing culturally responsive teachers: Rethinking the curriculum. *Journal of Teacher Education*, *53*(1), 20–32.

Wasicsko, M. M. (2002). *Assessing educator dispositions: A perceptual psychological approach*. Paper presented at the symposium on educator dispositions pre-conference, Eastern Kentucky University, Richmond, KY.

Weiner, L. (2000). Research in the 90s: Implications for urban teacher perception. *Review of Educational Research*, *70*(3), 369–406.

Wiggins, R. A., & Follo, E. J. (1999). Development of knowledge, attitudes, and commitment to teach diverse student populations. *Journal of Teacher Education*, *50*(2), 94–105.

Zeichner, K. M. (1993). *Educating teachers for cultural diversity*. Report of the National Center for Research on teacher learning, February 1993. East Lansing: Michigan State University.