



Factors Contributing to Preservice Teachers' Beliefs about Diversity

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The cultural makeup of educational professionals in the United States does not necessarily represent the students that walk through the front doors of the school each day. The majority of teaching professionals identify as White, female, heterosexual, and middle-class (Sleeter, 2008) with little to no experience working with diverse populations (Hollins & Torres-Guzmán, 2005); thus the cultural values and experiences that teachers bring in to the classroom may not match those of the students they are serving. Although the profession is attempting to recruit more diverse educators and school leaders, diversifying the teaching force is not the only answer to meeting the needs of students. Conducting research that examines teachers' beliefs about diversity is a vital step towards developing more culturally competent educators who practice teaching in a way that understands all students to be individuals with valuable knowledge and experiences (Banks, McGee, & Cherry, 2001; Gay, 2010; Plata, 2011; Trent, Kea & Oh, 2008).

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Cultural Competence and Teacher Education

Although researchers have been debating the operational definition of cultural competence for several decades, there are several basic tenets that are agreed upon within the field of education (Liang & Zhang, 2009). First, cultural competency is not an easily achievable static state that one can reach by completing a diversity training, taking a multicultural education course, or by experiencing other cultures. It is a continuous pursuit that requires thoughtful and constant development and growth of one's beliefs, skills, and knowledge of systems of power, privilege, and positionality (Howard, 2003). Second, cultural competence can vary according to environmental context and an individual's level of comfort. Diller and Moule (2005) conceptualize cultural competency as possessing and employing awareness and sensitivity of cultural differences as well as being able to respond to those differences appropriately. And finally, research in the field of teacher education has consistently revealed that cultural competence includes beliefs, awareness, and knowledge of diversity and multicultural education necessary to effectively employ the skills and pedagogical practices to teach culturally diverse students (Banks et al., 2001; Diller & Moule, 2005; Gay, 2000; Landson-Billings, 1999).

The field of teacher education has explored many ways to effectively prepare teachers to practice culturally responsive pedagogy. Hollins and Guzman (2005) conducted a review of over one hundred empirical studies focused on the design of teacher education programs related to cultural competence. They found two major categories of existing research: (a) studies of preservice teachers attitudes, beliefs, dispositions, and experiences with diversity, and (b) examinations of various methods of preparing teachers for working with diverse groups. This review also found a large number of studies that explored ways in which coursework and cross-cultural experiences affected preservice teachers' beliefs about diversity and cultural competency. Sleeter (2008) conducted a similar review of teacher education literature and found that the majority of White preservice teachers were unaware of the ways in which systematic oppression (predominantly racism) perpetuates inequalities within education and schools.

Despite the focus on cultural competence in teacher education, there is a very little research that compares cultural competence of general to special education teachers. While studying attitudes of preservice teachers as they entered a graduate program in education, Dee and Henkin (2002) found that preservice teachers preparing to become special education teachers reported significantly lower levels of comfort with cultural diversity than their colleagues preparing to become general education teachers. They also found that teachers enrolled in a special teacher education program reported significantly lower levels of agreement that assimilation to the dominant culture is necessary for student success (Dee & Henkin, 2002). Because of the inequalities that exist, such as the overrepresentation of students

of color in special education programs (Blanchett, Klingner, & Harry, 2009; Ferri & Connor, 2005), further examination of the differences between the beliefs of preservice general and special educators is needed.

Preservice Teachers' Beliefs about Diversity

Researchers, theorists, and practitioners have demonstrated that educators' beliefs about diversity, their classroom practices, and systematic educational equity and excellence are inherently interwoven (Banks et al., 2001; Castro, 2010; Garmon, 2004; Gay, 2000; Gay, 2010; Ladson-Billings, 1999; Plata, 2011; Pohan & Aguilar, 2001). Beliefs about diversity are an especially influential component of cultural competence and are instrumental in affecting expectations, behavior, and decision-making for educators (Liang & Zhang, 2009; Pajares, 1992; Sue, 2001).

Preservice teachers' beliefs about diversity and their varying levels of cultural competence can positively or negatively influence their ability to effectively work with culturally diverse students. Awareness of issues pertaining to diversity can lead to higher student expectations, more culturally appropriate instruction, as well as more effective collaboration with families (Banks et al., 2001; Diller & Moule, 2005; Gay, 2000). Educators who are not culturally competent do significantly more than just lower their own ability to work effectively and appropriately with students and families (Barnes, 2006; Mahon, 2006; Plata, 2011; Sleeter, 2008). This failure can inhibit culturally diverse students from realizing their educational and professional potential, force students to surrender their cultural beliefs and adopt mainstream ones, limit their ability to access the resources necessary to achieve both academic and personal success, and diminish their self-concepts as a result of systematic oppression (Banks et al., 2001; Castro, 2010; D'Andrea, Daniels, & Noonan, 2003; Plata, 2011).

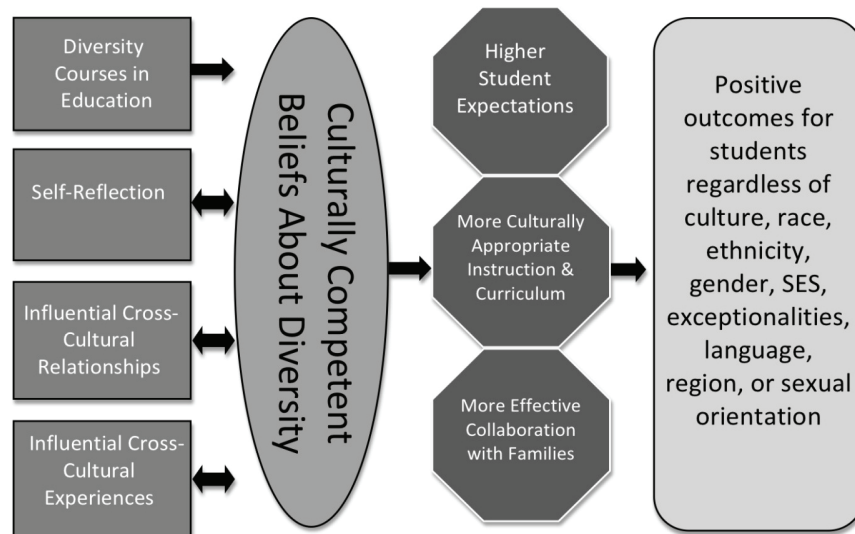
Teacher beliefs can also reproduce inequitable practices such as low expectations, biased assessments, materials, and practice, and growing power differentials (Banks et al., 2001; Diller & Moule, 2005; Gay, 2000; McAllister et al., 2000; Rao, 2005; Sheets, 2003). This cyclical process can result in unjust punitive measures, disempowering of students, or school failure. When students sense prejudicial practices (either explicitly acknowledging the bias or implicitly feeling the outcome of the bias), their investment in achievement can be compromised (Diller & Moule, 2005; Savage & Harley, 2009). In contrast, teachers who demonstrate greater cultural competence are more equipped to view students' behaviors, learning styles, and family functioning within a cultural context, which can lead to greater student success (Gay & Kirkland, 2003; Jennings, 2007; Kalyanpur & Harry, 1997; Ladson-Billings, 1999; Rao, 2005).

Contributing Factors to Beliefs about Diversity

Prior research suggests that there are a number of distinct and alterable factors associated with teachers' development of beliefs about diversity (Dedeoglu & Lamme, 2011; Garmon, 2004; Smith, Moallem, & Sherrill, 1997). For this study, we focused on examining factors that are simultaneously proximal, experiential, and malleable. These factors include: (a) completing multicultural courses in education (Brown, 2004; Middleton, 2002; Mitchell, 2009; Walker-Dalhousie & Dalhousie, 2006), (b) having experiences living and working in cross-cultural contexts (Adams, Bondy, & Kuhel, 2005; Akiba, 2011; Cicchelli and Cho, 2007; Cooper, 1990; Kyles & Olafson, 2008; Mahon, 2006), (c) experiencing significant cross cultural relationships (Dedeoglu & Lamme, 2011; Keengwe, 2010), and (d) engaging in critical self-reflection (Barnes, 2006; Gay & Kirkland, 2003; Howard, 2003; Liang & Zhang, 2009; Milner, 2006).

The purpose of this study was to gain a more comprehensive understanding of factors associated with preservice teachers' personal and professional beliefs about diversity in special and general education teacher preparation programs. Using empirical research in the fields of cultural competence and teacher education, we developed a logic model (see Figure 1) to explore the overall relationship between these factors and preservice teachers' beliefs about diversity. This study examines the component of the logic model related to the relationship between potential influencing factors and preservice educators' beliefs. The factors included in the

Figure 1
Theoretical Model for Preservice Teachers' Beliefs About Diversity



logic model have been shown to contribute to increased culturally competent beliefs for preservice teachers. For purposes of this study, we focused specifically on the relationship between preservice teachers' (a) demographic factors, (b) program of study (elementary versus secondary), (c) concentration area (special versus regular education), (d) completion of multicultural education coursework, (e) levels of self-reflection, (f) influential relationships, (g) influential cross cultural experiences, and (h) measured levels of personal and professional beliefs about diversity. We hypothesized that each of these factors would have a significant relationship with preservice teachers' beliefs about diversity.

Method

This study gathered information about diversity beliefs from a sample of preservice educators in general and special education programs at a large public university in the Pacific Northwest. We used a logic model to investigate the key factors that influence cultural competence and diversity beliefs (see Figure 1).

Table 1
Demographic Variables for Preservice Teachers (N = 56)

| Variable | Frequency | Percentage |
|---------------------------------|-----------|------------|
| Age | | |
| 20 – 30 | 36 | 62.5 |
| 31 - 40 | 12 | 21.4 |
| 41 – 50 | 6 | 10.7 |
| 51 – 60 | 3 | 5.4 |
| Racial/Ethnic Identity | | |
| Caucasian/non-Hispanic | 45 | 80.4 |
| Mixed Race | 7 | 12.5 |
| Asian/Pacific Islander | 2 | 3.6 |
| American Indian/Native Hawaiian | 1 | 1.8 |
| None/Prefer not to answer | 1 | 1.8 |
| Gender | | |
| Male | 16 | 28.6 |
| Female | 40 | 71.4 |
| Program | | |
| General Education | 30 | 53.6 |
| Special Education | 26 | 46.4 |
| Concentration | | |
| Elementary Education | 22 | 39.3 |
| Middle/Secondary Education | 34 | 60.7 |

Factors Contributing to Beliefs about Diversity

Participants

Participants in the current study included graduate students attending preservice education in either general or special education at a large public university. Within each of the targeted programs, the preservice teachers were enrolled in either elementary or secondary/middle education concentrations. Of the 105 students participating in these programs, 58 (55%) responded to the survey. However, two of the surveys had large amounts of missing data and were omitted from the analyses resulting in a final study population of 56. Select demographic information for the sample is provided in Table 1. The representation of age, gender, and race is proportionate to the student population at the university where the study took place as well as generally representative of the demographics in teacher education programs nationally (Ladson-Billings, 1999).

Measures

Demographic and program information. Information pertaining to student age, race, and gender along with information pertaining to each student's program (general education or special education) and concentration area (elementary education or middle/secondary education) were gathered in the first section of the survey.

Contributing factors. The second section of the survey included nine items designed to assess the four major factors related to cultural competence. Survey questions were developed based on empirical research in the field of multicultural teacher education and were reviewed and edited by three researchers identified as knowledgeable about multicultural education and survey item development. Items were created to reflect: (a) influential experiences working or living in other cultures and the importance of those experiences, (b) influential cross-cultural relationships and their importance, (c) multicultural education courses taken, and (d) the amount and importance of self-reflection. Cross-cultural experiences were defined by presenting several examples (lived abroad/in a community as a linguistic minority, worked in a community as a cultural minority, etc.). Cross-cultural relationships were defined as having been involved with another individual in a personal or professional context that influenced the ability to demonstrate the skills, knowledge, and dispositions of being aware of cultural differences, culturally sensitive, able to respond to these differences, and approach diversity appropriately. Multicultural education courses were described as a higher-education course that explicitly taught issues concerning diversity and multiculturalism. Self-reflection was described as personal and inner reflective dialogue that involved analyzing personal beliefs, identities, and professional behaviors concerning the value of cultural diversity (Gay & Kirkland, 2003). Because of the nature of our research, we purposefully kept definitions of these factors somewhat broad to allow participants to interpret them according to their own experiences. The nine items were also field tested with several graduate students and revised prior to data collection to help ensure clar-

ity. Responses to items were provided on a four-point scale ranging from “0”=not important to “4”=extremely important. Participants were also asked to rank order the four factors (1-4) to indicate the relative importance of the factors in contributing to their personal beliefs about cultural competency.

Personal and Professional Beliefs About Diversity Scale (PBADS, Pohan & Aguilar, 2001). The survey utilized the existing Personal and Professional Beliefs about Diversity Scales (Pohan & Aguilar, 2001). This instrument was chosen because the items provide a multi-dimensional view of diversity and include items pertaining to beliefs about race, ethnicity, gender, socio-economic, sexual orientation, disability, language, religion and immigration. According to Pohan and Aguilar (2001), diversity on the PBADS is defined broadly to be inclusive of historically marginalized socio-cultural groups.

The PBADS has been widely used in previous research and has been shown to be reliable and valid when used with preservice teachers (Kyles & Olafson, 2008; Middleton, 2002; Unruh & McCord, 2010; Pohan, Ward, Kouzekanani, & Boatright, 2009; Torok & Aguilar, 2000). The two subscales on the PBADS include the Personal Beliefs about Diversity factor (15 items, e.g., “The reason people live in poverty is that they lack motivation to get themselves out of poverty.”) and the Professional Beliefs About Diversity factor (25 items, e.g., “Teachers should not be expected to adjust their preferred mode of instruction to accommodate the needs of all students.”). Responses are provided on a five-point scale ranging from “1”=strongly disagree to “5”=strongly agree. The Personal Beliefs about Diversity Scale focuses on beliefs about relationships and situations in one’s personal context (family, community, parenting, etc.) whereas the Professional Beliefs about Diversity Scale examines issues in educational practice (school staffing, instructional materials, curricular design, etc.). Pohan and Aguilar (2001) reported an acceptable Cronbach’s alpha coefficients for the overall PBADS ($\alpha=.78$), and for each factor separately (range $\alpha=.81-.85$). On the current sample, the overall coefficient alpha for the full PBADS was .84.

Procedures

Data for this study were collected through a survey of preservice teachers from a teacher education master’s degree program. After obtaining approval from the human subjects review board, participants were offered one of two response options (i.e., hard copy or online). Participants were recruited directly through face-to-face visits (i.e., the first author visited various teacher education courses to present the study) and through an email that was sent to all graduate students enrolled in the special and general education teacher programs. All potential participants were offered an incentive of being entered into a drawing for one of three twenty-dollar gift cards. After all responses were gathered, data were entered into SPSS for analysis.

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Data Analysis

We conducted four sets of analyses to examine the relationship between preservice teachers' demographic variables, contributing factors to cultural competence, and personal and professional beliefs about diversity. First, we conducted preliminary group comparisons (*t*-tests and ANOVAs) to examine if there were gender, age, or race/ethnicity differences on the PBADS. Second, we conducted a multivariate analysis of variance (MANOVA) to examine potential program and area of concentration differences on the four contributing factors and the two PBADS subscales. For this analysis, the two grouping variables were program type (special education or general education) and program concentration (elementary education or middle/secondary education). The six criterion variables were cross-cultural experiences, cross-cultural relationships, multicultural education courses, self-reflection, and the two PBADS subscales—personal beliefs about diversity and professional beliefs about diversity. Third, we ran independent sample *t*-tests to examine if there were significant differences between the highest-ranked contributing factor and the levels of personal and professional beliefs about diversity. Lastly, hierarchical linear regression analyses were conducted to examine potential associations between the set of four contributing factors and preservice teachers' personal and professional beliefs about diversity.

Results

Demographic Factors

We first examined the group means of the preservice teachers' beliefs about diversity by age, race, and gender. Results of these analyses indicated that there were no significant age, race, or gender differences on the PBADS.

Program and Concentration

Results of the MANOVA indicated that the multivariate test for program type was significant (Wilks's $\Lambda=.75$), $F(6,46)=2.6$, $p<.03$, $\eta^2=.26$. Follow-up univariate tests revealed that preservice teachers enrolled in the special education program had significantly higher levels and value of cross-cultural experiences ($M=2.46$, $SD=1.6$) than did their general education peers ($M=1.83$, $SD=1.75$), $F(1,52)=5.7$, $p<.03$, $\eta^3=.10$. In terms of multicultural coursework, univariate results indicated that preservice teachers enrolled in the general education program had taken significantly more courses covering topics in multicultural education than did students in the special education program ($M=2.72$, $SD=.53$ vs. $M=2.08$, $SD=.106$), $F(1,52)=6.5$, $p<.02$, $\eta^2=.11$. There were no significant differences between the general and special education groups on the cross-cultural relationships, self-reflection, personal beliefs about diversity, or professional beliefs about diversity variables. In addition, there were no significant main effects for the program concentration comparisons (i.e., elementary vs. secondary). However, there was a significant interaction between program type and

concentration, (Wilks's $\Lambda=.77$), $F(6,46)=2.31$, $p<.05$, $\eta^2=.23$, which was due to the fact that 90% of the general education preservice teachers who were enrolled in the elementary education concentration had significantly fewer important cross-cultural living/working experience. For all other groups, the majority (66% to 75%) of the preservice teachers had engaged in a cross-cultural living or working experience that influenced their understanding of their own level of cultural competence.

Contributing Factors

Ranked order of contributing factors. To further examine preservice teachers' values we next rank ordered factors that they had identified as contributing to cultural competence. Overall, 39.6% of preservice teachers believed that having a significant cross-cultural relationship was the most important factor contributing to their cultural competence, 26.4% believed that a cross-cultural living and working experience was the most important factor, 17.0% believed participation in post-secondary courses in multicultural education was most important, and 17.0% identified participation in self-reflection as the most critical factor. Independent sample *t*-tests were run in order to analyze if there was a difference between the highest-ranked contributing factor and the levels of personal and professional beliefs about diversity for preservice teachers (see Table 2). Preservice teachers who believe that influential cross-cultural relationships are the most important factor in determining their levels of cultural competence had significantly higher scores on the Personal and Professional Beliefs About Diversity scale ($M=4.36$, $SD=0.29$) than preservice teachers who do not ($M=4.11$, $SD=0.48$), $t(51)=-2.17$, $p<.04$. There were no significant differences in the PBADS scores for those who believed

Table 2
PBADS Score by Ranked Importance of Contributing Factor to Development of Cultural Competence for Preservice Teachers

| Variable | Ranked Experience as Most Important (n = 14) | | Ranked Relationships as Most Important (n = 21) | | Ranked Coursework as Most Important (n = 9) | | Ranked Self-Reflection as Most Important (n = 9) | |
|-----------------------------------|--|------|---|------|---|------|--|------|
| | M | SD | M | SD | M | SD | M | SD |
| Personal Beliefs | 4.11 | 0.65 | 4.36* | 0.29 | 4.16 | 0.27 | 4.06 | 0.35 |
| Professional Beliefs | 4.14 | 0.34 | 4.23 | 0.31 | 4.12 | 0.44 | 4.12 | 0.33 |
| Personal and Professional Beliefs | 4.13 | 0.41 | 4.28 | 0.28 | 4.13 | 0.32 | 4.10 | 0.27 |

Note: The data for all four variables have a distribution that is approaching normal with a positive skew and no severe outliers.

* $p < .05$

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that multicultural education courses, cross-cultural living/working experiences, or self-reflection were the most important contributors to their levels of cultural competence.

Multiple regression analyses. For the final analysis, we conducted a multiple regression analysis wherein PBADS scores were regressed on the four influential factor variables (i.e., cross-cultural experiences, cross-cultural relationships, multicultural education courses, self-reflection). The results of this analysis (see Table 3) indicated that the four predictors contributed approximately one-tenth of the variance to PBADS score ($R^2=.10$, $F(4,54)=1.39$, ($p=ns$)). Although the multiple regression was not significant, preservice teachers' self-reflection approached significance in the equation ($\beta=.25$, $p<.08$).

After running the model of the full PBADS scores, we ran similar regressions on the Personal and Professional Beliefs About Diversity subscales. Results for the regression on Professional Beliefs About Diversity subscale scores indicated that the four predictors accounted for approximately 15% of the variance, $R^2=.14$, $F(4,54)=1.97$, ($p=s$). Although the overall equation was not significant, participants' ratings of self-reflection made a unique contribution to the equation ($\beta=.35$, $p<.02$). The four factors accounted for approximately 10% of the variance in Personal Beliefs About Diversity subscale scores, ($R^2=.08$, $F(4,54)=1.01$, ($p=ns$)). Although the multiple regression was not significant, the variable related to preservice teach-

Table 3
Summary of the Regression of Contributing Factors and PBADS

| Variable | Personal Beliefs About Diversity | | Professional Beliefs About Diversity | | PBADS | |
|---------------------------------|----------------------------------|--------|--------------------------------------|--------|---------|--------|
| | β | τ | β | τ | β | τ |
| Cross-Cultural Experiences | -.15 | -1.0 | -.14 | -.96 | -.16 | -1.11 |
| Cross-Cultural Relationships | .28** | 1.78 | -.03 | -.20 | .12 | .78 |
| Multicultural Education Courses | -.07 | -.48 | .02 | .14 | -.02 | -.15 |
| Self-Reflection | .05 | .32 | .35* | 2.56 | .25** | 1.79 |
| R^2 | .08 | | .14 | | .10 | |
| F | 1.01 | | 1.97 | | 1.40 | |

Note. N = 53. PBADS = Total Personal and Professional Beliefs About Diversity Scale

* $p < .05$ ** $p < .01$ (approaching significant)

ers' cross-cultural relationships made a marginally significant contribution to their personal beliefs about diversity ($\beta=.28, p\leq.08$).

Discussion

Given rapidly changing student demographics (Barnes, 2006; Gay, 2010; Trent et al., 2008), teacher education programs need to provide preservice teachers with opportunities to develop cultural competence through a variety of personal, professional, and educational experiences. This study provided specific information regarding the beliefs of preservice teachers about diversity and their development of cultural competency. Some of our results confirm previous research while others expand on the field's knowledge about preservice teachers and their beliefs about diversity. More specifically, our study indicated that preservice teachers believed that significant cross-cultural relationships are the most significant contributing factor to their cultural competence. Holding this belief was also associated with higher scores on the Personal and Professional Beliefs about Diversity Scale. We also found that the level of self-reflection activities and belief about the importance of self-reflection had the strongest association with the preservice teachers beliefs about diversity.

Personal and professional beliefs about diversity among 56 preservice teachers enrolled in a teacher education program were examined utilizing the PBADS (Pohan & Aguilar, 2001). Overall, the preservice teacher sample had high levels of personal and professional beliefs about diversity as demonstrated by their high scores on the Personal and Professional Beliefs About Diversity Scales ($M=4.17$ on a 5 point scale, $SD=.32$). This was encouraging because it indicated that the sample generally demonstrated culturally competent personal and professional beliefs about diversity. Although possibly due to the small sample size, our finding that there were no differences on PBADS scores by gender, race/ethnicity, and age group is also encouraging because it suggests that among the preservice teachers studied here, demographic variables did not seem to affect their personal and professional beliefs about diversity. These findings are consistent with prior research using the same instrument (Pohan & Aguilar, 2001).

After running a MANOVA to understand any differences in the preservice teachers' contributing factors and their personal and professional beliefs about diversity, we found some group differences that can inform teacher education programs. The special education preservice teachers differed significantly from the general education preservice teachers based on the level and value of cross-cultural experiences as well as their number of multicultural education courses taken, but they did not differ significantly on their levels of personal and professional beliefs about diversity. The data demonstrated group differences by program (general or special education) as well as an interaction effect (program by concentration). It is difficult, however, to draw conclusions regarding these effects on the preservice teachers' beliefs as these results tell us more about our sample and the specific

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nature of the two programs and concentrations at the university where the study took place. We found that preservice teachers in the general education program concentrating on elementary education were significantly less likely to have had an influential cross-cultural living or working experiences and therefore it did not contribute to their understanding of the beliefs about diversity. Since there were no significant differences found in the MANOVA concerning their PBADS scores, these differences only allow us to know more about our sample.

The results from the MANOVA point to the need for a closer examination of the differences in the coursework and experiences between general and special education programs as well as elementary and middle/secondary concentrations, which supports the small amount of literature that examines such differences (Trent, Kea, & Oh, 2008). In an analysis of teacher education research in general and special education from 1997 to 2006, Trent, Kea, and Oh (2008) found 39 studies conducted about preparing preservice teachers for diversity and multicultural education, but only seven were conducted with special education teacher candidates. It is of interest to note that in our study, special education preservice teachers had higher levels of culturally competent beliefs (although insignificant) than their general education colleagues. This is not consistent with previous research (Dee & Henkin, 2002), which found that general education preservice teachers reported more culturally competent beliefs. This current study supports the need for more research on teacher preparation programs and cultural diversity, with a need to focus on developing culturally competent special education teachers as well as the examination of disability and diversity from a strengths based model (Dee & Henkin, 2002; Trent et al., 2008). The PBADS measure examined multidimensional aspects of culture (race, SES, sexual orientation, gender, and disability), supporting the call by disability studies researchers to include disability in the development of knowledge, skills, beliefs and experiences necessary to become culturally competent practitioners (Johnson & McIntosh, 2009).

One of the most significant finding from the *t*-tests was that the majority of the sample indicated that their beliefs about diversity were impacted most influentially by cross-cultural relationships. Not only did the participants report that these relationships were the most influential contributor to their beliefs, but those that ranked relationships highest in contributing to their cultural competence scored significantly higher on the Beliefs About Diversity Scales. These findings are consistent with previous research from Dedeoglu and Lamme (2011) who found that preservice teachers who reported involvement in many cross-cultural friendships had a significantly higher level of beliefs about diversity than preservice teachers who reported some cross-cultural friendships or less.

We examined a model of four potential contributing factors to preservice teachers' beliefs about diversity. Our regression analysis found that the combined four factors contributed 10 to 15% of the variance to preservice teachers' personal and professional beliefs about diversity. These findings are consistent with previous literature demonstrating that preservice teachers who engaged in important

cross-cultural living or working experiences (Akiba, 2011; Kyles & Olafson, 2008; Mahon, 2006), experienced cross-cultural relationships (Akiba, 2011; Dedeoglu & Lamme, 2011) participated in self-reflection (Liang & Zhang, 2009), and those that have taken a post-secondary multicultural education course (Brown, 2004; Middleton, 2002; Mitchell, 2009) scored higher on the Personal and Professional Beliefs About Diversity Scale compared to peers who had not engaged in these educational or employment experiences.

Previous research concerning self-reflection and preservice teachers' beliefs is inconsistent. In Liang and Zhang's model of the structural factors contributing to cultural competence for preservice teachers (2009), they found that professional beliefs had the strongest relationship with self-reflection. Akiba (2011) found that the amount of self-reflection a preservice teacher participated in did not have a relationship with their beliefs about diversity. We found similar results to Akiba concerning the amount of self-reflection, however, we did find a significant correlation between the preservice teachers' beliefs about the importance of self-reflection and their beliefs about diversity in a professional context. This is an important distinction. These results suggest that it is not the frequency of self-reflection that contributes to culturally competent beliefs about diversity in the school context, but how highly the preservice teachers value this reflective practice. This finding supports the call for teacher education programs to not just allow the space for self-reflection, but to integrate reflection into the curriculum and support it through meaningful learning opportunities (Gay & Kirkland, 2003; Howard, 2003).

The multiple regression analysis also revealed that the relationships between the four factors and beliefs about diversity were stronger in professional contexts than in personal contexts. Supporting previous research (Akiba, 2011), this suggests that the four alterable, contributing factors have a stronger relationship with the preservice teachers' professional beliefs than their more general, societal beliefs about diversity. In order to better understand the construct of beliefs about diversity and to determine if this sample was consistent with previous research, we conducted an analysis of the relationship of the two subscales in the PBADS. Consistent with extant results (Middleton, 2002; Pohan & Aguilar, 2001), high correlation between the participants' personal and professional beliefs about diversity supports the notion that a professional's development of their beliefs about diversity is not contained to their classroom. This research strengthens the theory that we need to develop programming that encourages teachers to develop their knowledge and beliefs both inside and outside of the schools. As past studies have demonstrated, culturally competent teaching beliefs and practices are not a simple concept; they require constant development and focus that needs to be supported by teacher education programs and ongoing professional development (Tellez, 2008).

Although these four predictive factors were represented in the best model fit, our findings also suggest that there are other factors not included in this study that may also be related to preservice teachers' personal and professional beliefs about

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diversity. Because our research examined the contributing factors that were experiential and malleable, other factors that are more distal, dispositional, or psychological were not considered in our model. Although understanding these variables' relationship with preservice teachers' beliefs about diversity was outside of the scope of our study, these constructs could explain some of the unexplained variance. There is very little empirical research that documents this excluded category of factors so therefore developing further understanding of distal factors inherent with the individual is an important goal for future research (Garmon, 2004). For example, some previous research found that personality traits such as openness, liberalism, sensitivity, and sympathy have a significant correlation with beliefs and attitudes about diversity (Garmon, 2004; Unruh & McCord, 2010).

Limitations

While the current study is an important first step in understanding preservice teacher beliefs about diversity, it has several limitations. First, data were obtained from two teacher education programs in one university in the Pacific Northwest region of the United States. Because of this limited sample, our findings might not be generalizable to all teacher education programs. In addition, our findings concerning teacher education program and concentration areas, are generally inconclusive since we did not find any significant differences for PBADS scores. In addition, our results suggest that other important variables that were not included here may be related to preservice teachers' beliefs. Incorporating additional variables such as dispositional factors that are inherent to the individual would be important in future efforts (Garmon, 2004). Another omitted variable was the language of origin of the study participants, which could have unknown effects on our data analysis.

Although the PBADS includes items that examine various aspects of diversity (racial, linguistic, etc.), the measure does not examine the intersectional aspects of how we understand diversity and culture; each item looks specifically at one singular dimension of diversity. For example, there are no items that look at the potential intersections of disability and race, class and language, or gender and sexual orientation (Blanchett et al., 2009). This means that our measurement of preservice teachers' beliefs about diversity did not illuminate any beliefs on the crucial interaction of systems of power and privilege (Blanchett et al., 2009).

Concerning our statistical analysis, our major limitation was our limited sample size, which greatly reduced our statistical power. With a larger sample size, we could have possibly found more significant difference between groups as well as variance explained. Because this study was exploratory in nature, we are unable to claim causality regarding the four factors and their effects on preservice teachers' beliefs about diversity.

Finally, and possibly the most important, was that in our data collection tool, we did not explicitly define each of the malleable factors, allowing each of the participants to interpret what multicultural courses in education, experiences

living and working in cross-cultural contexts, significant cross cultural relationships and critical self-reflection meant to them individually. This is a threat to the phenomenological validity because the participants might have attributed meaning to the construct that we had not intended or for which we had not accounted.

Implications

While multicultural education and awareness of diversity has increased in recent years for preservice teachers (Milner et al., 2003; Trent et al., 2008), the field still needs to make substantial efforts to improve both research and practice. The present study is promising and could inform such future directions in research. A logical next step would be to conduct this study with a larger sample or to use this same survey in a pre-test, post-test design to examine the effects of an intervention such as a cross-cultural teaching experience or a course on multicultural education. In addition, in order to gain a more in depth understanding of the factors that lead to the cultural competence of preservice teachers, we recommend collecting qualitative data such as interviews or focus groups with the purpose of operationalizing the constructs of the four malleable factors of self-reflection, cross-cultural relationships, cross-cultural experiences, and multicultural education coursework. Since most measures of preservice teachers' beliefs about diversity look at the multifaceted nature of culture, but do not examine how they interact, an exploration of a way to reliably measure the intersectional nature of the beliefs of diversity would be a very valuable contribution to the field of multicultural education and teacher preparation (Blanchett et al., 2009). Finally, even though extant research and this study demonstrated a strong relationship between personal and professional beliefs about diversity, open questions remain regarding the conditions in which personal and professional beliefs differ. Future research might examine the border conditions that would determine where personal and professional beliefs diverge and the nature of those discrepancies.

This study also has implications for practice, specifically concerning the design and implementation of teacher education programs. Consistent with previous research (Pohan & Aguilar, 2001), we found that preservice teachers' personal and professional beliefs about diversity are strongly correlated. Because of this strong relationship, it is important to take into account both sets of beliefs as well as the professional and personal experiences that influence them. This includes not only supporting professional development, but also assisting preservice teachers to deeply and thoroughly examine their personal experiences if we want to support an increase in their culturally competent beliefs.

Compared to the other three factors examined in this study (self-reflection, cross-cultural experiences, and multicultural education courses), we found limited research examining cross-cultural relationships and preservice teachers beliefs about diversity. The apparent influence of significant cross-cultural relationships as demonstrated by our analysis compels us to advocate for developing opportuni-

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ties for preservice teachers to participate in cross-cultural relationships along with providing them the support to process those experiences (Garmon, 2004). Teacher preparation programs need to research effective means of organizing projects and experiences that include both the preservice educators, as well as individuals from other cultures so they can develop meaningful relationships to inform culturally competent beliefs (Dedeoglu & Lamme, 2011). These could include mentorships, friendships, or cultural immersion programs (Akiba, 2011). Along with multicultural education courses, preservice teachers would benefit from increased opportunities to work with diverse groups of students during their professional education programs. Several studies have demonstrated that preservice teachers benefit from being exposed to a variety of teaching contexts and field placement experiences throughout the duration of their program (Dedeoglu & Lamme, 2011; Milner et al., 2003) because issues in diversity need to be understood from multiple points of view in order to inform and ultimately affect preservice teachers' beliefs.

Previous research has demonstrated that preservice teachers' knowledge, values and beliefs about diversity are developed from a myriad of sources and experiences (Diller & Moule, 2001; Pajares, 1992; Tellez, 2008). This study has helped us understand factors related to preservice teachers' beliefs about diversity and how specific experiences may contribute to the development of cultural competence.

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