

Infusing Diversity Constructs in Preservice Teacher Preparation

The Impact of a Systematic Faculty Development Strategy

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This article provides an overview and the results of the Crosswalks Intervention, which was developed, implemented, and evaluated to support inclusive early childhood preservice programs to be more reflective of, and responsive to, cultural and linguistic diversity. The Crosswalks Intervention, funded by the US Department of Education, was a professional development model implemented across undergraduate programs in one eastern state. Strategies within the professional development model included a self-assessment and systematic planning process, a variety of professional development opportunities including workshops; ongoing coaching via onsite, phone, and electronic communication; electronic newsletter with instructional resources; a searchable database of evidence-based resources; and mini-grants. Evaluation dimensions included assessment of diversity within the content taught, diversity across the practica sites utilized, and overall program practices (eg, recruitment, mentoring) that supported diversity. Data included self-assessment protocols and were analyzed using a pretest and posttest analysis. Results indicated significant changes by intervention participants on the dimensions of knowledge, skills, and instructional strategies related to culture and language within their own coursework, and limited to no changes on dimensions of overall program coursework, practica, and university or department program practices. **Key words:** *cultural and linguistic diversity, early childhood, early childhood special education, faculty development, personnel preparation, preservice, unified, undergraduate education*

As the student population becomes increasingly diverse, educators must respond with efforts that

meet the needs of all students and their families. Educators must develop culturally sensitive curricula that integrate multicultural viewpoints and histories, apply instructional strategies that encourage all students to achieve, and review school and district policies related to educational equity. Teacher education programs in particular are responsible for preparing future teachers to promote meaningful, engaged learning for all students, regardless of their race, gender, ethnic heritage, or cultural background. (North Central Regional Educational Laboratory, 1997)

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It is interesting to note that 12 years ago teacher education programs were being encouraged to modify their curricula and practica to be more reflective of the growing diversity in the United States. The demographics in the United States have continued to evolve over this past decade and are changing

dramatically (Cartledge & Kourea, 2008; Maschinot, 2008), with about 45% of the children younger than 5 years now reflecting cultural and linguistic diversity (Population Reference Bureau, 2006). Although there are many definitions for the terms “culture” and “diversity,” it should be noted that each and every one of us has a culture (Sánchez & Thorp, 2008) and it is critical that we prepare future teachers to recognize the “tangible and intangible” dimensions of culture and diversity. Tangible dimensions can include the language that individuals use as well as how they dress and eat and/or the holidays they celebrate (Sánchez & Thorp, 2008). Likewise, future educators need to recognize those intangible dimensions of culture such as values, beliefs, and practices that a particular student and/or family embrace. What is difficult is promoting the ability of students to not stereotype a particular population and to reflect on how their own culture may impact their understanding of a practice or situation. Therefore, cultural diversity for this article addresses the individual culture that each person has as well as the broad definition as included in the Division for Early Childhood (DEC) Position Statement on Family Culture as “differences in race, ethnicity, culture, language, religion, education, income, family configuration, geographic location, ability, and other characteristics that contribute to human uniqueness” (DEC, 2002, p. 1).

To prepare future teachers to work effectively with children and families from cultural communities different from their own, higher education faculty and administrators need support in understanding the classroom and home intervention implications of diversity and in how to effectively integrate issues related to diversity into all facets of their early childhood preservice programs. Specifically, it has been suggested that personnel preparation programs need to emphasize the values (Thorp & Sánchez, 2003), content (Dieker, Voltz, & Epanchin, 2002; Mora, 2000; Washington, 2008), and pedagogy (Guillaume, Zuniga, & Yee, 1998; Ray, Bowman, & Robbins, 2006) that are consistent with cul-

turally relevant practices. Faculty members need support in addressing these dimensions directly through coursework, field experiences, and program structures (Burant, Quioco, & Rios, 2002; Dieker et al., 2002; Sánchez & Thorp, 2008). Finally, these efforts must take place within the context of state and national standards (Division for Early Childhood of the Council of Exceptional Children [DEC/CEC], 2007; National Association for the Education of Young Children [NAEYC], 2001) or the accountability frameworks to which higher education programs must be responsive.

Recent research, however, confirms that early childhood educators are not well prepared to serve diverse children and families (Maxwell, Lim, & Early, 2006; Ray et al., 2006). A national study indicated that while 54% of teachers taught students who had limited English proficiency or were culturally diverse and 71% taught students with disabilities, only 17% surveyed felt very well prepared to meet the needs of these students (National Center for Education Statistics, 2002). In a survey of early childhood educators and administrators, 44% of respondents indicated that they needed assistance in working with families from culturally and linguistically diverse (CLD) backgrounds (Pierce, 2003). Graduates of preservice programs are typically ill-prepared to be responsive to multicultural situations (Goor & Porter, 1999), with the majority of early childhood educators entering the field indicating that they prefer, and feel most comfortable working with, children from their own cultures (Evans, Torrey, & Newton, 1997). Thus, early childhood educators need support in becoming more “diversity mature” (Coker-Kolo, 2002), with particular attention focused on providing both students and practicing teachers with opportunities to explore their own cultural lens and to be exposed to diverse cultural views through direct experience. The price for not providing the knowledge and skills to support the development of culturally, linguistically, and ability diverse children is already being paid in their dramatic overrepresentation

in special education and in dramatic lags in achievement for young learners of color (Lewis & Perez, 2005; Ray & Aytch, 2007; Sadowski, 2006). Further compounding the challenges of preparing culturally responsive personnel is the low enrollment of individuals who reflect cultural and/or linguistic diversity in teacher preparation programs (Campbell-Whatley, 2003; Sleeter, 2001; Smith, Pion, Tyler, & Gilmore, 2003) and studies reporting the dearth of culturally diverse leadership (faculty, administrators) in institutions of higher education (IHEs) who can prepare, support, and mentor future personnel (Aguirre & Martinez, 2007; Portugal, 2007; Smith et al., 2003; Tyler, Smith, & Pion, 2003).

Personnel preparation programs in higher education, and especially teacher education, offer a significant vehicle for influencing the knowledge, skills, and dispositions of future educators and administrators. As Darling-Hammond and Garcia-Lopez (2002) observed,

It is impossible to prepare tomorrow's teachers to succeed with all of the students they will meet without exploring how students' learning experiences are influenced by their home languages, cultures, and contexts. . . . To teach effectively, teachers need to understand how learning depends on their ability to draw connections to what learners already know, to support students' motivation and willingness to risk trying and to engender a climate of trust between adults and students. (p. 9)

The Crosswalks Intervention, funded by a grant from the US Department of Education, was developed as a systematic support for teacher preparation programs to become more intentional about, respectful and reflective of, and responsive to cultural and linguistic diversity as part of coursework, field experiences, and program practices.

This study examined the design and impact of a systematic faculty development intervention. The following research questions guided the study: (a) Does participation in the Crosswalks Intervention produce a significant increase in the knowledge and skills about cultural and linguistic diversity of faculty and community partners? and (b) Does participation in the Crosswalks Intervention produce

an increased emphasis on cultural and linguistic diversity in coursework, fieldwork, and program practices by participating faculty and community partners?

METHODS

Study design

A nonequivalent comparison group evaluation design was employed (Gall, Gall, & Borg, 2003). Groups were selected because they yielded similar characteristics (all blended or unified early childhood [UEC] programs in 4-year higher education programs, bachelor degree programs with state certification, located within one state, similar state-mandated curriculum). The groups or teams were intact by university or college location and as teams they were assigned to either the intervention group or the comparison group. A questionnaire designed to collect self-assessment information was utilized. This approach was chosen because of the exploratory nature of the study (Gall et al., 2003). All sites completed the measures using a pretest/posttest (Cook & Campbell, 1979) design.

Participants

Participants were faculty at state-approved undergraduate early childhood licensure programs in North Carolina* and their community partners.† They will be referred to in this article as “UEC programs.” These programs (also known as “blended or

*In North Carolina, institutions of higher education (IHEs) are approved to offer an inclusive, interdisciplinary course of study designed to prepare personnel to work with young children (age birth to 5 years) with and without disabilities in diverse community settings (eg, early intervention, Head Start, preschool, public school). These undergraduate programs respond to state standards for blended birth-kindergarten preparation and teacher licensure.

†Community partners included individuals who use, support, and employ students from the program (eg, practicum site administrators, practicum supervisors, program directors, and family members).

Table 1. Demographic information for faculty and community partners

	Faculty/community partners intervention				Faculty/community partners comparison			
	Pre (<i>n</i> = 27)		Post (<i>n</i> = 25)		Pre (<i>n</i> = 22)		Post (<i>n</i> = 19)	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender								
Males	2	7	2	8	2	9	1	5
Females	25	93	23	92	20	91	18	95
Ethnicity								
African American	3	11	1	4	3	14	2	11
Native American	6	22	6	24				
European American	18	67	18	72	18	82	16	84
Other—Iranian					1	4	1	5

inclusive teacher education programs”) prepare educators to support children with and without disabilities and their families. The age range for the UEC teacher education program is focused on children, ages birth through 5 years, and their families. Table 1 illustrates the demographics for the study participants.

During the recruitment phase of the Crosswalks Intervention, all UEC programs in the state were invited to participate except a small number of UEC programs that had participated in a previous pilot for this study. Five applications were submitted, and all 5 applicant programs were selected to participate because they met the following criteria: (1) availability, (2) geographical locations, and (3) willingness to participate in the required sequence of professional development either in the intervention group or in the comparison group. These UEC programs were then randomly assigned to either the intervention group (*n* = 2 IHEs) or the comparison group (*n* = 3 IHEs).

Once the IHEs were identified, each site was required to identify a campus contact or liaison to this study as well as faculty and community partners for its team. Participating faculty were those who taught core UEC courses, held responsibility for field supervision, or were campus administrators (eg, department

chair, dean). Community partners were local individuals who were well familiar with the program. These included recent graduates of the UEC program, practica supervisors, or co-operating teachers; administrators who regularly hire the UEC program graduates; and family members who have been recipients of early intervention and/or UEC services in the area. Each UEC program was asked to select community partners who would reflect the diverse communities they serve. The selection of community partners was negotiated between the faculty liaison and one of the principal investigators for this study.* The process of identifying community representation to the team through the environmental scan was a critical step in assisting the UEC programs to identify what types and/or form of culture and diversity existed within their community; how culture and diversity was represented across their faculty, staff, and students; and where culture and diversity was not

*An environmental scan for community representation was an early activity of the Crosswalks Intervention. The scan helped teams to determine whether any key community members were missing and needed to be invited to join. Additional faculty and community partners were added to both intervention teams as a result of this process. Therefore, the intervention group sizes were larger than those of the comparison groups.

Table 2. Ethnic and ability diversity by role and group^a

Diversity representation by role	Intervention (<i>n</i> = 25) ^b post		Comparison (<i>n</i> = 19) ^c post	
	Faculty (<i>n</i> = 12)	Community partners (<i>n</i> = 13)	Faculty (<i>n</i> = 8)	Community partners (<i>n</i> = 11)
Ethnicity ^d	1	6		3
Disability—parent		2		3

^aAll values represent *n* values

^bTwo individuals did not respond to the postrequest (1 faculty, 1 community partner).

^cThree individuals did not respond to the postrequest (all faculty).

^dNon-European-American.

represented within their program. Furthermore, the demographic form addressed diversity through self-identification across the following characteristics: gender, race/ethnicity, languages spoken, home language, ability, parent of a child with a diverse ability, discipline, role, and setting. The 3 comparison group programs completed the demographic forms but did not complete the environmental scan step during the study. They were given the environmental scan instrument as a resource after the study was completed.

A small amount of attrition occurred in the study by participants (2 individuals from the intervention group and 3 individuals from the comparison group). Individuals who dropped out of the intervention group included 1 faculty and 1 community partner; individuals who dropped out of the comparison group included 3 faculty members. One faculty member identified the reason for attrition (accepting a faculty position elsewhere) while no responses were obtained from the remaining 4 participants.

The majority of the faculty/community partners in both groups were females (93%) and European American (73%), and the average age was 47 years. Five individuals (11%) across the intervention and comparison groups indicated that they were a parent of a child with a disability. Of particular interest was the identification of ethnic and/or ability diversity reported by more individuals who identified themselves as community par-

ticipants rather than faculty participants (see Table 2) across the intervention and comparison groups.

The range of years of experience in the field of personnel preparation for those individuals identified as faculty was as low as 2 years and as high as 33 years, with an overall average of 14 years. Faculty participants across both groups identified themselves primarily from the fields of education, early childhood education, early childhood special education, and/or special education. The 2 intervention sites had 13 to 14 members, whereas the comparison groups had approximately 5 to 9 members—as previously noted.

Intervention

Subjects in the intervention group participated in a structured series of professional development opportunities that were based on the findings of the Systems Change Model (Winton, Catlett, & Houck, 1996). The Systems Change Model has been effective in increasing the emphasis on issues of exceptionality and inclusion in early childhood preservice and inservice professional development. The principal investigators and an external consultant team used evidence-based practices related to culturally responsive values, content, and pedagogy to create the Crosswalks Intervention. This intervention features an emphasis on systematically building the capacity to increase the emphasis on cultural and linguistic diversity in the

values, content, and instructional practices of a higher education program. The Crosswalks Intervention was designed to achieve these results through an intentional sequence of professional development focused on the evaluation and redesign of course content instructional strategies, field experiences, and collaboration (eg, with family member and community partners).

The Crosswalks Intervention included 7 intervention components designed to build the values, content, and pedagogy that undergird culturally responsive practices. Faculty members and community partners participated in a sequence that is listed as follows:

1. A **2-day needs assessment and planning process** to identify strengths, challenges, and needed cultural and linguistic diversity-related changes in program coursework and practica. This initial event was held on the campus of each participating UEC. Crosswalks Intervention staff and consultants facilitated large and small group discussions and captured a full account of all discoveries. Faculty members and community partners developed a plan for change that specified targets in the areas of coursework, practica, and program practices. Priorities and a plan for change were generated by each of the 2 groups. A coordinated sequence of services and supports (described in the following text) was then developed to address each plan.

2. **Professional development was designed, implemented, and evaluated for each campus**, based on its plan for change. For example, one campus prioritized a need for increased emphasis on supporting young dual-language learners. This need was addressed through workshops on second-language acquisition, collaborating with linguistically diverse families, supporting young dual-language learners in community settings, and working with interpreters and translators. E-mail support from project staff and consultants was provided to help in identifying relevant readings, assignments, and instructional materials and to support the development of practica in sites that serve young dual-language learners.

Each campus received a minimum of 2 onsite professional development visits per semester throughout the intervention. Project staff was present for each of these visits to monitor progress, address concerns, and gather evaluation and anecdotal data.

3. To further ensure progress toward each campus' goals, project staff and consultants were **available on an ongoing basis** by phone, conference call, e-mail, and at naturally occurring events such as conferences and meetings. This was an effective way to monitor the extent to which both knowledge acquisition and knowledge application had occurred. Both intervention programs took advantage of this resource intermittently throughout the Crosswalks Intervention, with contacts occurring at least once each month.

4. **Mini-grants** of \$500 to each intervention program to support acquisition of new instructional resources for increasing the emphasis on diversity. In the case of the example mentioned in the preceding paragraph, that program used mini-grant funds to purchase relevant resources (eg, *One Child, Two Languages, Developing the Young Bilingual Learner*). One program used some of the mini-grant money to support diverse community partners and family members in doing in-course presentations.

5. Based on priorities identified in each program's plan for change, a **series of 7 full-day face-to-face faculty workshops** ("Crosswalks Talks") were provided on culturally relevant, evidence-based content and instructional approaches (eg, addressing issues of bias, prejudice, and privilege, collaboration with CLD families, culturally responsive literacy instruction, effective methods for supporting lesbian, gay, bisexual, and transgender families, addressing white privilege, and using dilemmas of practice). Participants from the 2 intervention programs and other faculty were invited to participate in each of these events.*

6. An **electronic newsletter** was distributed to participants in the intervention

*Faculty from comparison UECs were not eligible to participate in the Crosswalks Talks.

group every other month. Each of the 12 “Care Packages” distributed during the Crosswalks Intervention included information on upcoming professional development opportunities and evidence-based resources related to cultural and linguistic diversity content and pedagogy. These materials were provided to help faculty identify culturally responsive methods and materials to inform their practices and incorporate in their work.

7. A **searchable database of evidence-based resources** (“Crosswalks Toolbox”) was developed to assist participants in locating resources related to cultural and linguistic diversity. Materials in the database are indexed by state and national (DEC, NAEYC) standards, aspect of diversity, type of resource, content, and other dimensions. Thus, a faculty member could, for example, search for a video that addresses cultural dimensions of emergent literacy.

Timing was a critical factor in the Crosswalks Intervention. The 2-day assessment process occurred at the beginning of the intervention. The initial 6 months of professional development commenced immediately after that event, and continued over 2 full semesters, for an 18-month sequence of intervention. The posttest data were collected at the end of the study, upon completion of all 7 components of the intervention model.

Each participant (intervention and comparison) signed a letter of commitment. This letter outlined the participation requirements including data collection procedures. While subjects in the comparison group did not receive any professional development during the study, they were offered the opportunity to participate in a 3-day Crosswalks Faculty Institute and to access all electronic resources after the study was completed. We believe access to these resources assisted in the high return rates of the instruments during the final collection period.

Instruments

Multiple sources of data were developed to assist in analyzing the impact of the intervention and for formative evaluation to aid in continuous improvement. These data

sources included 2 self-assessment instruments; formative evaluation surveys (end-of-event forms conducted after onsite professional development, meetings, and retreats); periodic phone interviews; and a final electronic survey on overall impact. This article provides the results from the 2 self-assessment instruments.

New self-assessment instruments were developed for the project to measure perceived changes in content knowledge and skills related to *cultural and linguistic diversity*, as described in the following sections. The items were adapted from self-assessment instruments, previously used by early childhood personnel preparation projects funded by the US Department of Education’s Office of Special Education Programs (OSEP), review of diversity literature, and content validity provided by 4 experts in the field of diversity education for young children and their families. The study instruments were then piloted by 2 UEC higher education or community partners in another state. Based on their verbal and written feedback, the 2 instruments targeted at faculty and community partners were revised.

Instrument #1: The Crosswalks Assessment of Knowledge, Skills, and Instructional Strategies

The Crosswalks Assessment of Knowledge, Skills, and Instructional Strategies (*CAKSKIS*) assessed participants’ perceptions on their own knowledge and/or skill levels across a 46-item self-assessment instrument addressing cultural and linguistic diversity including a 45-item, 6-point rating scale ranging from a score of 0 (none) to 5 (high) as well as 1 open-ended question. This self-assessment instrument was designed around 3 specific dimensions: knowledge content, skills, and instructional strategies. First, the instrument required the participants to self-assess their own content knowledge about children and families who are CLD ($n = 21$ items), including 5 items related to general knowledge, 5 related to supporting child learning, 3 related to families, 5 related to assessment, and 3 related to collaboration.

Second, the instrument required participants to self-assess their individual skills related to working with and/or teaching about children and families who are CLD ($n = 12$ items), including 3 items related to child learning, 4 related to families, 3 related to assessment, and 2 related to collaboration. Third, the instrument required participants to assess their own knowledge and/or individual skills across 12 items related to the use of instructional strategies and resources to support cultural and linguistic diversity within their teacher preparation efforts (eg, use of case studies, adult learning strategies, DVDs). Finally, 1 open-ended question provided an opportunity for the respondents to indicate an instructional strategy about which they would like more information. This qualitative response was used for further technical assistance efforts; only the quantitative data are reported in this article.

Instrument #2: The Crosswalks Coursework, Practica, and Program Evaluation

The Crosswalks Coursework, Practica, and Program Evaluation (*CCPPE*) instrument assessed participants' perceptions of the degree to which their UEC teacher education program reflects cultural and linguistic diversity across coursework, practica, and program practices. The *CCPPE* is a 43-item rating form that includes both a 37-item, 6-point rating scale ranging from a score of 0 (never) to 5 (always) and 6 open-ended questions. The 37 scaled items were grouped into 3 specific dimensions including evaluation of the extent to which cultural and linguistic diversity is infused within 16 items related to coursework (eg, encourage students to take pride in their own culture and home languages; learning about, dialogue, and reflection about the skills needed to work with dual-language learners); 6 related to practica (eg, occur in a variety of settings, interact directly with children and families of diverse racial, cultural, linguistic, and socioeconomic backgrounds; collaborate with and learn from interpreters, translators, and/or cultural mediators); and 15 related

to program practices (eg, department has strategies for recruiting students from [CLD] backgrounds).

Participants in both intervention and comparison groups completed the 2 instruments. High return rates were obtained across both participant groups for the 2 self-assessment measures. Return rates for the 5 faculty/community partner sites ranged from 67% to 100%, with a combined return rate of 93% ($n = 25$ of 27) for the intervention group and 86% ($n = 19$ of 22) for the comparison group (see Table 1). The aggregate posttest results include 12 faculty and 13 community partners represented on the intervention group and 8 faculty and 11 community partners represented on the comparison group.

Data collection and analyses

The 2 self-assessment instruments were mailed with a cover letter describing the purpose of the study, inclusion criteria, and a self-addressed return envelope. Pretest data were collected prior to the intervention in January 2005, and posttest data were collected at the end of the intervention in June 2006. All quantitative data were entered into a statistical database package (SPSS), and descriptive statistical analyses (Gall et al., 2003) were conducted. To ensure 100% accuracy of data entry, numerical data were entered by a trained research assistant and reviewed by a second independent assistant. Descriptive statistics were conducted to obtain the means and standard deviations. A *t* test was applied to the pretest and posttest results to identify any differences in the knowledge, skills, and program practices of the participants before and after the intervention. We examined significance across 3 levels: (1) $P < .05$, (2) $P < .01$, and (3) $P < .001$.

RESULTS

The results will be reported by the 2 research questions focusing on changes in individual knowledge and skills or overall programmatic impact.

Research question #1: Does participation in the Crosswalks Intervention produce a significant increase in the *knowledge and skills about cultural and linguistic diversity of faculty and community partners*?

The *CAKSkIS* instrument assessed perceived changes in the knowledge and skills of the participants related to cultural and linguistic diversity. As previously noted, this instrument was divided into 3 major subgroups: (1) knowledge about CLD children and families (items 1-21), (2) skills related to working with and/or teaching about CLD children and families (items 22-33), and (3) knowledge and/or skills (items 34-45) related to CLD instructional strategies and teaching resources. Tables 3 and 4 show that the majority of indicators (34 of 45 items or 76%) assessed on the *CAKSkIS* instrument had significant changes at the $P < .05$ or higher level between the pretest and the posttest scores for the intervention group while few indicators (3 of 45 items or 7%) obtained statistically significant changes between the pretest and the posttest scores for the comparison group. Nearly all of the indicators (11 of 12 items or 92%) under the “instructional strategies and resources” section of the *CAKSkIS* instrument demonstrated an increase in knowledge or skills by the intervention participants at the $P < .001$ level (5 items), $P < .01$ level (1 item), or $P < .05$ level (5 items). Exemplars of these items include (a) the ability to apply adult learning principles to CLD learners (students, families) and (b) the use of and ability to find instructional resources such as activities, videos, readings, or texts that support student learning related to CLD children and their families.

More than half of the indicators (14 of 21 items or 67%) under the “knowledge” section of the *CAKSkIS* instrument demonstrated an increase in scores by the intervention participants at the $P < .001$ level (13 items) or $P < .05$ level (1 item). Exemplars of these items included (a) knowledge on how to de-

sign relationships and experiences with the environment, activities, and other children/families so that children learn about or are exposed to multiple cultures and languages and (b) knowledge on how to adapt teaching and intervention methods to meet the needs of CLD children and families. Similarly, most of the indicators (9 of 12 items or 75%) under the “skills” section of the *CAKSkIS* instrument demonstrated an increase in scores reported by the intervention participants at the $P < .001$ level (1 item), $P < .01$ level (2 items), or $P < .05$ level (6 items). Exemplars of these items included (a) skills in finding and using interpreters, translators, and cultural mediators and (b) skills in working with diverse families and team members to develop shared priorities and plans.

Very few of the indicators on the *CAKSkIS* (3 of 45 items or 7%) obtained statistically significant changes between pretest and posttest scores reported by the comparison group. It should be noted that these significant changes were all at the $P < .05$ level (see Tables 3 and 4). These 3 items were (a) knowledge of specific legal issues and precedents related to CLD, (b) knowledge of different preferences, priorities, and child-rearing practices of families who are CLD, and (c) feeling competent and confident in their abilities to work with all diverse families. Therefore, participation in the Crosswalks Intervention did produce significant increases in a higher number of scores reported on the *CAKSkIS* instrument by individuals in the intervention group compared to scores reported by individuals who did not participate in the intervention.

Research question #2: Does participation in the Crosswalks Intervention produce an increased emphasis on cultural and linguistic diversity in coursework, fieldwork, and program practices by participating faculty and community partners?

While the *CAKSkIS* instrument assessed perceived changes for the individual faculty and community participants on their knowledge and skills, the *CCPPE* instrument

Table 3. Crosswalks Assessment of Knowledge, Skills, and Instructional Strategies (CAKSkIS) traditional pretest/posttest results

	Faculty/community partners							
	Intervention (<i>n</i> = 25)				Comparison (<i>n</i> = 19)			
	Pre-mean	SD	Post-mean	SD	Pre-mean	SD	Post-mean	SD
Knowledge of/about								
1. Own cultural traditions, attitudes, interaction styles, language	3.96	0.93	3.96	0.79	4.21	0.54	4.12	0.66
2. Own cultural traditions and attitudes that are different/similar to others	3.72	0.94	3.72	1.02	3.79	0.54	3.84	0.76
3. Important role language/culture holds for children/families	4.08	0.91	4.20	0.71	4.32	0.58	4.16	0.76
4. Impact of the dominant/mainstream culture on research and practice	3.36	1.04	3.72	1.02	3.44	0.98	3.50	0.86
5. Specific legal issues and precedents related to CLD	2.09	1.34	2.77	1.15	2.16	0.90	2.68 ^a	1.00
6. How culture impacts development and learning of each child	3.80	1.04	4.00	0.71	3.63	0.96	3.84	0.76
7. Effective approaches for supporting the learning of CLD young children	3.04	1.06	3.72 ^b	0.94	3.16	0.83	3.26	1.10
8. How to design environment/activities exposing multiple cultures/languages	3.00	1.12	3.84 ^b	1.03	3.32	0.89	3.47	0.84
9. How to adapt methods to the needs of CLD children/families	2.68	1.03	3.52 ^b	0.92	3.16	0.83	3.37	0.83
10. Effective approaches for supporting the transitions of CLD children	2.64	0.99	3.68 ^b	1.07	2.79	0.92	3.00	1.11
11. Different preferences, priorities, and child-rearing practices of CLD families	2.72	1.43	3.20	0.96	2.95	0.91	3.37 ^a	0.76
12. Practices, supports, and resources responsive to preferences of families	2.36	1.19	3.4 ^b	0.96	2.63	0.83	3.05	0.85
13. Importance of helping children to preserve their home language/culture	3.42	1.32	4.08 ^a	1.18	3.68	1.00	3.84	0.90
14. Culturally responsive information gathering from diverse families	2.76	1.20	3.36 ^b	1.19	2.89	0.94	2.79	0.85
15. Nondiscriminatory assessment practices/tools	2.56	1.29	3.20 ^b	1.15	2.63	1.01	2.79	0.85
16. SLA processes and application to the assessment process	2.13	1.36	3.21 ^b	1.14	2.84	1.30	2.79	0.98
17. Conducting assessments with careful consideration to CLD	2.44	1.39	3.20 ^b	1.26	2.68	1.11	2.74	0.73
18. Providing verbal/written feedback to families that are strength-based	2.72	1.46	3.72 ^b	1.31	3.63	1.16	3.37	0.96
19. Collaborating with team members with expertise in SLA and/or CLD	3.20	1.35	3.76 ^b	1.13	3.68	0.75	3.68	0.95
20. Accessing available campus/community resources related to CLD	2.68	1.41	3.84 ^b	1.11	3.16	0.83	3.16	0.90
21. Engaging interpreters, cultural mediators and/or translators	2.56	1.26	3.64 ^b	1.08	3.05	0.91	3.26	0.87
Skilled in								
22. Designing strategies for styles of CLD individuals	2.63	1.28	3.50 ^a	1.14	3.11	0.90	3.06	0.94
23. Using effective approaches for supporting CLD young children	2.67	1.27	3.33 ^a	1.17	3.11	0.90	3.33	0.97

(continues)

Table 3. Crosswalks Assessment of Knowledge, Skills, and Instructional Strategies (CAKSkIS) traditional pretest/posttest results (*Continued*)

	Faculty/community partners							
	Intervention (<i>n</i> = 25)				Comparison (<i>n</i> = 19)			
	Pre- mean	SD	Post- mean	SD	Pre- mean	SD	Post- mean	SD
Skilled in								
24. Facilitating learning about CLD and support intercultural experiences	2.71	1.33	3.38 ^a	1.17	3.11	1.02	3.17	0.79
25. Using a variety of strategies for eliciting family stories	2.58	1.41	3.33 ^a	1.27	2.83	1.15	3.06	0.80
26. Working with diverse families/team members to develop shared priorities	2.79	1.32	3.54 ^c	1.02	3.06	1.16	3.30	1.03
27. Sharing information with CLD families	2.71	1.40	3.59	1.14	2.72	0.89	3.33	0.84
28. Feeling competent/confident in my abilities to work with diverse families	3.00	1.37	3.63	1.09	3.17	0.71	3.72 ^a	0.96
29. Collaborating with families in the assessment process	3.00	1.51	3.26	1.32	3.17	0.86	3.28	0.96
30. Utilizing strategies to gather information about CLD children/families	2.79	1.32	3.33 ^a	1.27	2.94	0.87	3.06	0.73
31. Using assessment for identifying/planning supports/services for families	2.63	1.38	3.25 ^a	1.07	3.06	0.94	3.22	1.06
32. Implementing school/community resources related to CLD	2.75	1.11	3.38 ^c	1.10	3.22	0.88	3.28	0.83
33. Finding and using interpreters, translators, and cultural mediators	2.42	1.06	3.25 ^b	1.11	3.00	0.84	3.06	0.94
34. Applying adult learning principles to CLD learners (students, families)	2.12	1.13	3.36 ^b	0.99	2.61	1.09	2.67	1.14
35. Self-reflection on my abilities related to CLD	2.92	1.29	3.92 ^a	1.04	3.78	0.81	3.78	0.88
36. Adapting methods of teaching to support CLD students as adult learners	2.75	1.29	3.46 ^c	1.02	3.17	1.10	3.22	1.26
37. Supporting the participation of CLD family members in my teaching	2.48	1.26	3.40 ^a	1.00	2.72	0.96	2.94	1.00
38. Supporting the participation of CLD community partners	2.76	1.39	3.56 ^a	0.92	3.06	1.11	3.33	0.91
39. Orchestrating dialogue related to CLD	2.75	1.36	3.50 ^a	1.02	3.22	1.11	3.06	1.21
40. Using instructional strategies to support critical reflection	2.88	1.30	3.54	1.10	3.00	1.19	3.11	1.32
41. Using interactive techniques for instructional purposes	3.21	1.38	3.54 ^a	0.98	3.33	1.14	3.39	1.42
42. Using instructional resources to support CLD children/families	2.92	1.29	3.72 ^b	1.10	3.22	1.11	3.33	1.28
43. Finding instructional resources that support learning about CLD	2.88	1.33	3.92 ^b	1.00	3.06	1.06	3.11	0.96
44. Finding instructional strategies and instructional resources on CLD	2.84	1.28	4.00 ^b	0.87	3.11	0.96	3.00	0.91
45. Using instructional strategies and instructional resources on CLD	2.72	1.24	3.96 ^b	0.84	3.11	1.02	3.06	1.0

Abbreviation: CLD, culturally and linguistically diverse.

^a*P* < .05.

^b*P* < .001.

^c*P* < .01.

Table 4. Significant results by instrument category: *CAKSkIS* ($N = 45$ scaled items)

Measure Content dimensions (corresponding item number)	Number of items	Intervention			Comparison		
		$P < .001$	$P < .01$	$P < .05$	$P < .001$	$P < .01$	$P < .05$
Knowledge CLD children—Families: Subtotal	21	13		1			2
General knowledge (1-5)	5						1
Supporting child learning (6-10) Families (11-13)	5 3	4 1					1
Assessment (14-18)	5	5		1			1
Collaboration (19-21)	3	3					
Skills CLD children—Families: Subtotal	12	1	2	6			1
Child learning (22-24)	3			3			
Families (25-28)	4		1	1			1
Assessment (29-31)	3			2			
Collaboration (32-33)	2	1	1				
Knowledge/skill—CLD instructional strategies: Subtotal (34-45)	12	5	1	5			
Total— f	45	19	3	12	0	0	3
Total—%	100	42	7	27	0	0	7

Abbreviations: *CAKSkIS*, Crosswalks Assessment of Knowledge, Skills, and Instructional Strategies; CLD, culturally and linguistically diverse.

assessed perceived changes across the entire UEC program's coursework or curricula, practica, and university or department practices supporting CLD. As indicated on Tables 5 and 6, more indicators assessed on the *CCPPE* instrument (12 of 37 items or 32%) reported significant changes at or above the $P < .05$ level between the pretest and posttest scores for the intervention group as opposed to the results (2 of 37 items or 5%) obtained for the comparison group. However, it should be noted that these are modest results compared to those obtained by the intervention group on the *CAKSkIS* instrument. Eleven of the 16 items (69%) under overall program curriculum on the *CCPPE* instrument demonstrated an increase in scores at the $P < .05$ level (5 items), $P < .01$ level (5 items), or $P < .001$ level (1 item) for the intervention group. Exemplars of these items included (a) the UEC program providing students the opportunity to recognize intragroup and intergroup differences among members of different groups and (b) reflection about culturally appropriate methods of interaction, teaching, and/or intervention. For the comparison group, only

1 statistically significant result (1 of 16 or 6%) was obtained under the overall UEC program curriculum and at the $P < .05$ level. This item was "...courses in the UEC program provide support to students in learning about issues that may be of concern to specific groups (eg, racism and prejudice)." Please see Tables 5 and 6 for specific results.

None of the items that fell under practica, field experiences, and student teaching received significant increases on the *CCPPE* instrument by either the intervention group or the comparison group when pretest and posttest results were analyzed. Indicators that fell under this section of the *CCPPE* included the following: (a) practica/field experiences in a variety of settings including those that support natural environments and inclusion; (b) opportunities for students to interact with CLD team members from diverse agencies; (c) providing students with opportunities to collaborate with interpreters, translators, and cultural mediators; and (d) encouraging flexible options for the placement of students according to their interests, experiences, and needs.

Table 5. Crosswalks Coursework, Practica, and Program Evaluation (CCPPE) results

Provide students with opportunities to:	Faculty/community partners							
	Intervention (n = 25)				Comparison (n = 19)			
	Pre-mean	SD	Post-mean	SD	Pre-mean	SD	Post-mean	SD
Overall UEC program curriculum:								
1. Increase knowledge of own culture and heritage	3.35	1.11	3.82 ^a	0.81	3.56	0.73	3.50	0.89
2. Learn that they are members of different cultures	3.31	1.20	4.00 ^b	0.82	3.67	0.98	3.93	0.80
3. Take pride in their cultures and home languages	3.75	1.00	4.19	0.83	3.69	0.70	3.88	0.81
4. Cross-cultural learning and conflict resolution	3.50	1.04	3.89	0.68	3.59	0.87	3.76	0.90
5. Anti-racist and anti-bias curricula and approaches	3.06	0.87	4.00 ^b	0.84	3.43	1.02	3.86	0.95
6. Cultural methods of interaction, teaching, and intervention	3.39	0.98	4.11 ^b	0.76	3.76	0.83	3.88	0.78
7. Skills needed to support ELL and/or home language	3.06	1.06	3.61 ^a	1.14	3.54	0.66	3.62	0.87
8. Recognize intragroup and intergroup differences	2.85	0.99	4.00 ^c	0.71	3.57	0.94	3.29	1.14
9. Learn about/from CLD groups in nonstereotypic ways	3.06	0.75	3.76 ^a	0.90	3.57	0.94	3.57	0.94
10. Acknowledge own biases and recognize their own culture	3.18	1.07	3.88 ^b	0.78	3.64	0.63	3.64	0.84
11. Learn how CLD and SES influences EC development/practices	3.58	0.96	4.21 ^a	0.85	3.53	0.80	4.00	0.79
12. Respect beliefs, values, and traditions of CLD families	3.74	0.87	4.16	0.83	3.81	0.75	4.19	0.83
13. Recognize “power” differential between them and families	3.53	1.01	4.06 ^a	0.75	3.50	0.90	3.67	0.98
14. Learn about issues to specific groups (eg, racism)	3.39	0.98	4.00 ^b	0.84	3.27	0.79	3.82 ^a	0.98
15. Respect dignity/right to privacy of children and families	4.11	0.96	4.44	0.62	4.50	0.63	4.69	0.60
16. Learn to balance CLD patterns of families and communities	3.50	0.86	3.89	0.76	3.64	0.92	4.00	0.63
Overall program practices–practica, field experiences, and student teaching practices								
17. Work in variety of settings including NE and inclusive	3.70	0.98	3.85	0.81	4.13	1.02	4.25	0.86
18. Interact directly with CLD children and families	3.86	0.91	3.90	0.94	4.19	0.91	4.13	1.02
19. Work in CLD home- and community-based settings	3.75	0.79	4.00	0.97	3.62	1.04	3.31	1.03

(continues)

Table 5. Crosswalks Coursework, Practica, and Program Evaluation (CCPPE) results (Continued)

	Faculty/community partners							
	Intervention (<i>n</i> = 25)				Comparison (<i>n</i> = 19)			
	Pre-mean	SD	Post-mean	SD	Pre-mean	SD	Post-mean	SD
Provide students with opportunities								
20. Interact with diverse team members	3.61	0.85	3.83	0.99	3.54	0.78	3.38	0.87
21. Collaborate with interpreters, translators, and cultural mediators	2.64	0.84	3.07	1.07	2.92	1.00	2.83	0.94
22. Have flexible options for students	3.75	0.86	3.88	1.09	4.08	0.49	3.85	1.07
Overall university/college/department								
23. Have diverse faculty/staff who reflect diverse students	2.92	1.04	2.92	0.64	2.87	1.06	3.07	0.96
24. Have students who reflect the diversity of community	3.74	0.87	3.95	0.78	3.00	1.00	3.27	0.96
25. Encourage dialogue/reflection about CLD experiences	3.15	0.80	3.85 ^a	0.67	3.46	0.52	3.62	1.04
26. Creates celebrated and respected environments	3.89	0.96	4.22	0.88	3.80	0.68	4.00	0.85
27. Have advising strategies/resources for CLD students	3.67	0.98	3.92	0.90	3.33	1.23	3.25	0.87
28. Encourage campus participation in CLD activities	4.00	1.13	3.80	0.94	3.18	0.60	3.09	0.70
29. Encourage recognition of intragroup and intergroup differences	3.57	1.22	3.50	0.65	3.40	0.70	3.60	0.97
30. Draw upon CLD community resources	3.56	0.78	3.89	0.68	3.14	0.77	3.50	0.65
31. Draw upon CLD campus resources	3.69	1.01	3.88	0.89	2.82	0.60	3.18	0.87
32. Have strategies for recruiting CLD students	3.00	1.21	3.33	0.98	2.89	1.05	2.89	0.78
33. Pursue strategies for increasing the diversity of students	3.79	0.89	4.00	0.88	3.55	0.93	3.66	0.81
34. Have an admissions policy supporting CLD students	4.55	0.93	3.82	1.08	3.86	1.21	3.71	0.95
35. Seek resources to support CLD students.	3.83	1.19	3.83	1.11	3.43	0.53	2.71 ^a	0.49
36. Pursue community resources to address CLD issues	3.43	0.94	3.64	0.74	3.18	0.75	3.18	0.40
37. Discuss CLD issues with community stakeholders	3.15	0.90	3.54	0.88	3.30	1.16	2.70	0.67

Abbreviations: CLD, culturally and linguistically diverse; EC, early childhood; ELL, English language learners; NE, natural environments; SES, socioeconomic status.

^a*P* < .05.

^b*P* < .01.

^c*P* < .001.

Table 6. Significant results by instrument categories: *CCPPE* (37 scaled items)

Measure content dimensions (corresponding item numbers)	Number items	Intervention			Comparison		
		<i>P</i> < .001	<i>P</i> < .01	<i>P</i> < .05	<i>P</i> < .001	<i>P</i> < .01	<i>P</i> < .05
Overall UEC program curricula related to CLD (1-16)	16	1	5	5			1
Overall UEC practica, field experiences, and student teaching practices related to CLD (19-24)	6						
Overall university and department practices and efforts related to CLD (27-41)	15			1			1
Total— <i>f</i>	37	1	5	6	0	0	2
Total—%	100	3	14	16	0	0	5

Abbreviations: *CCPPE*, Crosswalks Coursework, Practica, and Program Evaluation; CLD, culturally and linguistically diverse; UEC, unified early childhood.

Finally, each of the 2 groups obtained 1 statistically significant score under the final section of the *CCPPE* instrument, which assessed overall university and department practices. The intervention group reported change at the *P* < .05 level on a single item, “encourage and support dialogue and reflection about the cultural and linguistic experiences of participants in the program,” while the comparison group reported change at the *P* < .05 level on a different item, “seek resources to provide social, emotional, instructional, and financial support to CLD students.” The remaining 13 items under overall university or department practices did not yield any change by the intervention group or the comparison group on the *CCPPE* instrument. Exemplars of these types of items were as follows: (a) having diverse faculty and students, (b) having consistent advising strategies that support all students, and (c) having an admissions policy that intentionally considers students who represent a wide range of diverse cultural and linguistic backgrounds. Tables 5 and 6 identify items where no change was obtained. Therefore, participation in the Crosswalks Intervention did produce modest changes on the dimension of overall UEC curriculum emphasizing cultural and linguistic diversity, while little to no changes were reported by either the intervention group

or the comparison group on the other 2 key programmatic dimensions (practica and university/department practices).

DISCUSSION

“The emphasis I place on cultural and linguistic diversity in my work is a constant now; not just a fleeting thought but as looking through a lens.”

Project participant

This statement expressed by a faculty participant is a powerful reminder of how often there is little to no emphasis on cultural and linguistic diversity issues even in teacher education programs located in diverse communities (Ray et al., 2006; Sleeter, 2001). In several of the chapters of *New Teachers for a New Century: The Future of Early Childhood Professional Preparation* (2001), a major publication of the US Department of Education (2001), one of the challenges identified as critical to early childhood education is the lack of an appropriate preparation for teachers working with young CLD children. Too often preservice teachers have little to no relevant learning experiences or direct contact with diverse communities that can help them work effectively with and responsively to the

children and their families. Horm (2003) commented that the most difficult issue for an early childhood teacher educator to confront is how to question, challenge, and transform preservice teachers' negative attitudes toward children from diverse backgrounds. How can teacher educators be successful with this critical issue when they have not been prepared in their own doctoral programs to address issues of diversity? It takes more than a single course in multicultural education to develop the competencies and skills needed to support the development of others. Borrowing words from the title of Howard's book (2006), *We Can't Teach What We Don't Know*, teacher educators cannot teach what they do not understand.

The results of the study of the Crosswalks Intervention illustrate the potential of this professional development approach for addressing the concerns mentioned earlier in the text. Teams that participated in the intervention group reported statistically significant increases in 75% of the items related to individual knowledge, skills, and instructional strategies as compared with the comparison group. Faculty and community partners were able to report changes in their abilities and skills to be more responsive to diversity-rich topics within their courses and in their ability to access key materials to enhance diversity such as texts, readings, DVDs, and other instructional resources. Teams that participated in the intervention group reported some changes across their overall UEC teacher education curriculum, and little to no changes on dimensions that related to practica and overall program practices.

It should be noted that the greatest amount of change was identified on items such as knowledge, skills, instructional strategies, and/or activities that are more directly under the control of the faculty and community partners as compared with those items that were more systemic or university focused, such as admissions policy, linking advising to institutional supports on diversity, and/or hiring practices. One interpretation of these results is that dimensions related to in-

dividual faculty knowledge and skills (as measured by the *CAKS&IS*) are more proximal in nature and can demonstrate change immediately, whereas dimensions related to department or university practices (as measured by the *CCPPE*) are more distal in nature and may need more time and/or support to demonstrate change. Additional follow-up inquiries are under way to determine the extent to which this interpretation may hold true. We have begun to examine sustainable changes in course syllabi and practica experiences after participation in the Crosswalks study.

Finally, the lack of diversity represented by the faculty participants in this study continues to support the literature. It is interesting to note that the majority of diverse representation in this study came from the community partners, and often only after IHE teams completed an environmental scan to identify diversity within their communities. Until our higher education systems attract and support more diverse faculty members into the field of early childhood education, diverse community members may provide a readily accessible partnership to help bridge this gap.

Limitations

Evaluation of professional development and subsequent improvement in student or learner outcomes is quite complex (Guskey, 2003, 2007). Although the data indicate promising changes, the results of the current study may be limited because of the following 3 factors. First, the methodology of individual scores through self-report holds some flaws due to the reliability of the information (Davis et al., 2006; D'Eon, Sadownik, Harrison, & Nation, 2008; Eva, Cunnington, Reiter, Keane, & Norman, 2004). Some studies have indicated that those who may be incompetent typically do not know that they are and overrate themselves while individuals who are highly qualified tend to underrate themselves (Kruger & Dunning, 1999).

Second, time may have impacted these results. Overall program, university, or college changes may be more distal in achievement and need more time before evidence is

obtained. The participating higher education programs had just begun to operationalize many of the changes when the posttest data were collected. Therefore, the results from the data gathered within the 18-month study period may have been collected too soon to accurately assess and capture all systemic changes and impact data.

Third, the nonequivalent comparison poses limitations in its research design, since the comparison group did not receive any type of intervention. One would assume change would happen to those receiving the intervention as compared with those who did not receive any intervention. Future studies are being designed to determine which of the Crosswalks Intervention professional development model components (eg, assessment, ongoing coaching, access to resources) yield the most impact and in what form (eg, phone calls, e-mails, onsite observation). These results do, however, provide support for the use of a systematic faculty development approach to increase the capacity of faculty and community partners to change course content and instructional practices and perhaps ultimately contribute to changes in students' capacity to respond to young children and families from diverse cultural and linguistic communities.

CONCLUSION

Given an intensive, purposeful intervention focused on the professional development of higher education faculty and community partners, this study was able to demonstrate change on self-report measures. The opportunities for self-reflection and self-assessment, the sequence of professional development, the influx of resources, and the ongoing support provided through the Crosswalks Intervention yielded positive results. Faculty in the intervention groups reported statistically significant change in what they teach (content) as well as how they teach (instructional strategies utilized). All intervention participants reported significant change in their knowledge and skill related to culturally responsive practices. Within an 18-month in-

tervention period, significant change was reported on multiple items that were related to instructional decisions under the direct control of faculty members, such as syllabus design, activities, and teaching resources. No change was reported on practices over which faculty/community partners may have limited control, such as utilizing more diverse practica, field experiences, and student teaching sites. Connecting students with experiences in diverse communities with diverse family members and team members may take more time and effort because of the development of new relationships with different community partners.

Finally, little significant change was reported on items that related to overall university or department practices such as consistent advising strategies that provide access to departmental and institutional resources for diverse students or having an admissions policy that intentionally considers students who represent a wide range of diverse culture and language. In these latter 2 instances, it seems that time is an important variable. Many university-level practices, such as establishing new positions, have at least a year lead time, so it would be unlikely that we would have seen significant change in these areas when the posttest data were collected.

In a recent work, Sánchez and Thorp (2008) argue that professional development programs must support the development of knowledge, skills, and dispositions needed by their graduates to work competently, comfortably, and confidently with young CLD children and their families. This requires that faculty also develop the necessary skills, knowledge, and dispositions to be able to (a) accept the challenge to analyze and discuss controversial and difficult issues; (b) commit to the idea of infusing the voices of diverse families and communities in the instructional arena; (c) develop an understanding of the role of culture in their own lives as professionals as well as in the lives of families; (d) prepare personnel who can critically reflect on their practices; and (e) as trainers, engage in a process of self-study and critical reflection. Undergirding

these issues is the need for faculty to develop new skills and acquire new content, capabilities that can be supported through the professional development systems such as the Crosswalks Intervention. We believe the diversity resources offered through this study (self-assessment instruments, environmental scan, and searchable database of evidence-based resources on CLD) will assist inclusive early childhood teacher education programs to begin this process.

The Crosswalks Intervention offers an effective option for addressing this critical gap in the preparation of early childhood teacher educators. In the final analysis, the results of this study truly attest to the willingness of teacher educators to invest the time and effort to increase their understanding about differences in child rearing practices, life ways, beliefs, and culturally based perceptions of disability as they relate to working with children and families.

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