Bilingual Latina/o Teacher Candidates' Use of WebQuests to Tap into Community Resources for Math and Science

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Abstract

This article examines the math and science training of Latina/o bilingual teacher candidates who are preparing to teach in bicultural/bilingual EC-4 programs. Specifically, it focuses on an Internet-based project called Community WebQuest that the candidates produce as part of their coursework in a math and science methods course taught by the second author of this article. The teacher candidates identified math and science resources for learning in the communities around the schools where they were doing their fieldwork, which led many of them to shift from a deficit to an additive view of their students' communities. Primary data for this paper include the candidates' Community WebQuest projects and their responses to a questionnaire. In addition, the authors drew from a larger qualitative study of bilingual Latina/o preservice teachers' bilingualism and biliteracy.

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There exists a large achievement gap in the scientific, mathematical, and technological learning of Latina/o students. More specifically, Latina/o students lack access to scientific and mathematical inquiry and technological literacy, which in turn can negatively affect their achievement levels as well as their possible entry into math- and science-related fields of study. Despite this problem, traditional research on students' math and science achievement has mainly addressed the needs of white, middle-class students, while not paying enough attention to the needs of culturally and linguistically diverse students. Our research tackles the math and science achievement gap for Latinos/as by examining the math and science training of Latina/o bilingual preservice teachers who are preparing to teach in bicultural/bilingual EC-4 programs. Specifically, we focus on an Internet-based project called "Community WebQuest" that the teacher candidates produce as part of their coursework in a math and science methods course taught by the second author.

The goal for the community WebQuest was for the student teachers to go out into the communities around the schools where they were conducting their fieldwork and identify resources for math and science learning. As educational researchers (Gonzalez et al., 2005; Zentella, 2005) have documented, Latino/a homes and communities possess an abundance of resources and knowledge that can be leveraged in the classroom with positive results for the learning and achievement of Latino/a students. This article draws from a larger qualitative study to analyze the WebQuest projects that the bilingual Latina/o teacher candidates produced as well as their reactions to the community aspect of the project. The study found that a majority of teacher candidates shifted from a deficit to an additive view of their students' communities.

Literature Review

The Achievement Gap

Catsambis (1994) traces the development of differences across gender and race/ethnicity for middle school students in mathematical opportunity, achievement, and choice. Drawing from data from the National Educational Longitudinal Study of 1988 (NELS) as part of the National Center for Education Statistics, Catsambis found that, with regard to achievement, differences between eighth-grade students were wider and more prevalent due to race/ethnicity rather than to gender. Indeed, Latino students are one of the lowest-scoring groups in mathematical achievement and are overrepresented in low-ability mathematics classes.

The Nation's Report Card, issued by the National Assessment of Educational Progress (NAEP) project, provides an adequate national portrait of student performance in science (Grigg, Lauko, & Brockway, 2006). The NAEP gathered data from sample populations throughout the United States, including public and private schools. In 2005, based on a scale of 0 to 300, the average score for eighth grade white students was 160 (below the proficient mark of 170), and the score for eight grade Hispanic students was 129 (below the basic mark at 143). The report makes clear the discrepancy between white and Hispanic student scores. Unfortunately, little progress has been made to decrease this gap.

A study by Crosnoe, Lopez-Gonzalez, and Muller (2004) examines the reasons for Mexican-American underperformance in math and science achievement in comparison to other minority populations. Drawing from the National Longitudinal Study of Adolescent Health, they analyzed students' trajectories through the math/science pipeline and found that the students' lower math and science scores did not result from inherent differences between them and their peers. Rather, the differences likely stemmed from the following: the Mexican-American

students' social class status, a more distanced relationship between family and school due in part to the parents' immigrant generational status, and a one-size-fits-all curriculum that failed to accommodate the individual needs of students.

Spade, Columba, and Vanfossen (1997) also highlight social economic status (SES) as an important factor affecting curricular choices and access. They note that the number of advanced courses in both math and science increases in conjunction with the social class of the school. While different learning opportunities exist in affluent, middle, and working-class schools, tracking is firmly entrenched before students ever enter high school. A higher SES provided greater access to math and science opportunities.

Oakes (1990) offers an extensive review of literature dealing with opportunity, achievement, and choice among women and minorities with regard to science and mathematics. She points to the three most important factors that can increase student participation in the sciences: 1) the opportunity to learn these subjects, 2) academic achievement in these subjects, and 3) the desire to pursue a career in one of these fields. Oakes cites the National Assessment of Educational Progress (NAEP) project (1983), sponsored by the National Center for Education Statistics, as crucial to showing that students' positive attitudes have very little bearing on higher achievement or in increasing the opportunities for student participation in these subjects. What is most important is that women and minorities typically have had less access to factors that facilitate achievement and participation, which leads to their underrepresentation in scientific fields.

The issue of language further complicates access for English Language Learners. Brown (2005) examines how linguistic proficiency affects the results of standardized test scores for minority students. Even though the linguistic proficiency of ELLs was below grade level, they

still had to learn state-prescribed content curriculum and had to take exams that tested their content knowledge in English, a language they had not fully developed. Consequently, ELLs will tend to produce lower scores than their peers on assessment instruments.

The Digital Divide

Alongside the math and science components, instructional technology plays an important role in the design of WebQuests. The turn of the century continued a trend toward the ubiquitous use in the United States of computer (at two-thirds reported use in both schools and homes) and Internet technologies (at 54% reported use in both schools and homes). Thus, it is easy to assume that this trend is the case for all populations in the U.S. (Bronack, 2006). However, statistics point out that as technology use and ownership increase, the digital divide persists and does not appear to be going away soon. Large gaps exist between different ethnicities: Blacks and Latinos are less likely to own home computers than are whites (at 50.6 and 48.7 percent, compared to 74.6 percent, respectively). Equally wide gaps exist between the same groups with regard to Internet access (40.5 and 38.1 percent compared to 67.3 percent, respectively) (Fairlie, 2005). This divide parallels significant disparities along racial, economic, and educational lines (Bronack, 2006). While access to computers is not the same as learning to use them effectively, it is an indispensable step in achieving computer literacy and technological competence, both for students and teachers (Hess & Leal, 2001).

Hess and Leal (2001) found evidence of a digital divide among urban districts with regard to the quantity of computers provided. The districts that spent more per capita were the ones with the lowest student-to-computer ratio. They point out that mere access is not the objective of classroom technology (Hess & Leal). Of great importance is how school districts

and teachers use the technology they have, and ultimately, how their students will benefit from computer-mediated education.

The use of computers and Internet technologies to mediate learning provides educational benefits, including inquiry-based learning, expanding literacy, and making student work visible (Bass, 2007). Inquiry-based learning is accomplished through the use of primary sources found through the World Wide Web and involves exploration of multimedia environments that address different learning styles by including combinations of text, image, sound, and moving images. As students' interest in a topic is stimulated, they are given an opportunity to go beyond the "predigested" quality of many textbooks, and engage with real people and real problems (Bass, p. 4). Such activities allow for authentic thinking processes with electronic archives that can create guided interactive experiences. These electronic tools afford students' opportunities to interact across time and space in new contexts that can reshape reading, writing, and critical thinking. Thus students have multiple spaces in which to communicate and investigate, as well as time to actively contribute to the learning process as creators of knowledge for a specific audience. Traditional student schoolwork is replaced by authentic, complex and dialogical tasks (Bass, 2007). Technology, then, provides a public forum where students can plan, design, and construct projects that showcase their multiple voices. Learners become knowledge makers rather than its interpreters. This changing technological landscape highlights the important role teachers can play in narrowing the digital divide as they incorporate technology in their classrooms.

The Role of Teachers

Fradd, Lee, Sutman, and Saxton (2001) investigated the best ways to incorporate language development with science inquiry in the instruction of ELL students. Their student

participants were matched with teachers of their same gender and language to ensure cultural congruence (Trueba & Wright, cited in Fradd et al., 2001). While the researchers observed ELL student achievement gains, questions remained regarding the most effective forms of inquiry geared toward the teaching of ELL students. The researchers emphasized the need for teacher training and insight into the most effective instructional materials to move from teacher-directed to teacher-facilitated approaches in the classroom. The study also stressed the importance of creating instructional materials tailored to address specific students' needs, as opposed to instituting one-size-fits-all, generalized population standards. And lastly, they posit that teachers sharing the same language and culture as the students can provide insights and help reduce barriers to the development of science curricula for ELL students.

Cole and Zuengler (2003) examined Latino high school students' participation in a "real science" inquiry. Students worked with a local clinic on an asthma project. Rather than benefitting the students, the project resulted in such negative outcomes as the classification and segregation of students by ability and student disenfranchisement by their school and community because they failed to give students credit for their work. These negative outcomes were brought about by poor teacher training, poor administrative leadership, and poor project design. Even though undertaken with the best of intentions, the poorly planned science curriculum backfired for its intended beneficiaries. Hence, Cole and Zuengler's study further points to the importance of providing quality training for teachers.

Luft and Roehrig (2005) explored three case studies of novice teachers (during their first year of teaching) who worked in primarily Latino settings. The three teachers did not share in their students' home culture, but constructed a curriculum that would meet the state-mandated standards while challenging their students. The teachers were selected because they

demonstrated enthusiasm toward the implementation of inquiry-based science. However, enthusiasm alone did not translate into the classrooms they had envisioned. They neglected to use instructional strategies to create optimal classroom environments for all students; instead, they relied on how they themselves were taught. They also failed to incorporate their students' Latino/a culture into the curriculum. This study highlights the need for teacher education programs to properly prepare teachers to work with culturally and linguistically diverse students.

Methods

This study drew from a larger two-year qualitative study[1] that examined the preparation of over 60 Latina/o teacher candidates preparing to teach in bilingual classrooms across Texas. The larger study examined the teacher candidates' bilingualism and biliteracy development, language ideologies, and views on immigration (Sánchez & Ek, 2007/2008). This article explores the teacher candidates' understandings and views of the math and science resources found in their students' communities as reflected in the WebQuest project. To examine this question, the authors analyzed the students' finished community WebQuests, looking for themes and patterns of what places the teacher candidates chose to focus on and on the content of their WebQuests. Analysis of these WebQuests led us to inquire whether the project influenced the candidates' views of the communities. Thus, that semester we designed a questionnaire that asked the following: 1) What did you learn about the community through doing the WebQuest? 2) Did your views of the community change as a result of your WebQuest project? If so, how? What did you think before? What do you think now? Lynda Cavazos administered the questionnaire, and the 21 students in her class responded.

[1] The Principal Investigators for the larger study are Drs. Lucila D. Ek and Patricia Sánchez at UTSA.

Field Site and Participants

The city in South Texas where research was conducted has a population of 1.3 million, of which 58.7% are Latino/a residents. The Latina/o teacher candidates—both traditional and non-traditional college students—were overwhelmingly female, with varying levels of bilingualism. Participants included long-term Tejanas, bordertown second-generation Mexican-Americans, Fronterizas who grew up on both sides of the Texas-Mexico border, Mexican nationals, South American immigrants, Puertorriqueñas, and self-identified Chicanas. The majority of the participants were second-generation immigrants—that is, they are the U.S.-born children of immigrant parents. They come from various places but predominantly from San Antonio, the U.S./MX border, the Texas Valley, and other Texas cities.

Ek and Cavazos have taught two of the four practicum courses in the bilingual teacher education program. These four courses are taught as a block, with a cohort of students taking all four classes together two days of the week. The other three days of the week, students fulfill a field experience component that requires 85 hours of observations at local elementary schools. This "Block" semester comes directly before the full semester of student teaching at our institution. Ek has taught the course on language arts, while Cavazos has taught the math and science course. All three authors are bilingual Latinas, and both Ek and Cavazos are former elementary school bilingual teachers.

Description and Rationale for the Community WebQuest

A WebQuest is inquiry learning that develops problem-solving skills through Internet research and is designed to scaffold student learning in an analysis and synthesis form. The focus of the technique centers on Web resources, as well as on templates and support materials located on the Internet (Dodge, 1995). WebQuests can be created for any discipline while

maintaining an interdisciplinary approach. An important consideration in the selection and/or creation of WebQuests is that it meets current curriculum needs, and that the focus of the task remains on using information rather than merely looking for information (Dodge). In Dodge's words, a WebQuest is the following:

> An inquiry-oriented activity in which most or all of the information used by learners is drawn from the web. WebQuests are designed to use learners' time well, to focus on using information rather than looking for it, and to support learners' thinking at the levels of analysis, synthesis, and evaluation (Dodge, 1995, cited in Hassanien, 2006, p. 42).

The bilingual teacher candidates design their WebQuests to develop the elementary age students' analytical and critical thinking skills. WebQuests work best for grade levels three through five because upper-grade students can work more independently with computers and the Internet. Incorporating math and science objectives, the teacher candidates first choose a topic that is grade-level appropriate and of student interest. They align a topic and exploratory question with three supporting activity questions. The elementary students then work on the teacher-designed WebQuests to explore research that stemmed from their community.

Cavazos developed the community connection because she felt there was a cultural gap between the original WebQuest project and the Latino/a bilingual teacher candidates. She was motivated by a talk by educational researcher Christine Sleeter that focused on preparing teachers to identify and build on students' assets. One of Dr. Sleeter's group activities required the teacher to observe and listen in the school's neighborhood. Things to observe included geometric shapes of the building designs, kinds of plant life, businesses, and music playing in the

background. Once the teacher completes the observation, he or she reformulates the results to produce lesson plans.

Cavazos determined that the school neighborhood walk activity would be the launching pad for a "Community" WebQuest. A Community WebQuest connected community and school through the leveraging of cultural resources. Math and science content and the cultural connection found in the community could be the foundation for the Community WebQuests. The Community WebQuest instructions are the same as the traditional WebQuest, but with two added criteria of ethnographic data and taking community photographs. The ethnographic data are similar to an observation, but with more detailed questions. The bilingual teacher candidates were asked to take a community tour of the assigned elementary school, documenting their experiences through pictures of the school and businesses. They wrote a two-page essay that described 1) the types of businesses found in the community; 2) the recreational places or activities available, particularly for children; 3) the types of homes found in the community; and 4) the background, history, and description of the school. In addition, the candidates were asked to include any community events or situations that caught their attention.

The relevance of the ethnographic data lies in that the bilingual preservice teachers have to observe the community as the elementary students experience it, exploring, for example, where they buy their groceries or take the family car for repairs. The goal was for the teacher candidates to recognize the neighborhood around the school as a wealth of resources for math and science education. In doing this, the bilingual teacher candidates acquire the inquiry process to carry over as they become professional educators when they begin to explore their school's cultural community. The math and science knowledge begins in the community, transfers to technological classroom research, and the end result is a community WebQuest. An important

objective for the Community WebQuests was to steer teacher candidates away from their stereotypes of some of the poorer communities. Some candidates, for example, expressed fear about going to their school's surrounding neighborhoods, imagining them as dangerous or crime-ridden places or as communities without anything to offer the children (Sánchez & Ek, 2008).

Findings

Community WebQuest Topics

Our analysis of the teacher candidates' completed Community WebQuests pointed to their use of community businesses as jumping-off points for the development of math and science lessons. In particular, teacher candidates made links to such places as restaurants, shops, and Laundromats to integrate the content areas. Examples of their topics included:

- The history, nutrition, growing practices of fruit (linked to the city's Terminal Market)
- The physical properties of soap (linked to a neighborhood Laundromat)
- Composition of diamonds (linked to a jewelry store in the city)
- Production of maize, factors affecting growth of corn- and tortilla-making (linked to a neighborhood *Taquería*).

With these topics, the teacher candidates were successful at integrating math and science state standards. They produced attractive, colorful, and interesting WebQuests designed to push the elementary school students' higher cognitive skills and processes. For example, a group chose a restaurant as an "inquiry lab" for teaching math and science. This inquiry stemmed from *masa* (or dough, for the preparation of tortillas in this case), with an exploratory question of "what is *masa*?" and supporting questions of "where does *masa* come from?" and "are there any other products made from *masa*?"

Given that one of the goals of the WebQuest project was for student teachers to learn the standards they were supposed to be teaching, much emphasis was placed on integrating the Texas Essential Knowledge and Skills (TEKS) standards. For example, for the maize WebQuest, the teacher candidates focused on such math skills and processes as quantitative reasoning, probability, and statistics**.** Guided by these TEKS, the preservice teachers who designed the maize WebQuest included the following inviting science activity for the students: "Take a trip with me to a year in the life of a corn" to find the parts of a corn kernel and the six stages of kernel development. The students could click on a link that took them to a bilingual (English/Spanish) Web site where they could explore the six stages of kernel development, complete several activities, and take a quiz. A second task focused on developing students' math skills including ratios, graphing, and solving word problems. In addition to teaching the teacher candidates how to put together math and science lessons for their EC-4 students, the WebQuest project also taught them about their elementary students' communities.

Teacher Candidates' Views of their Students' Communities

Our analysis of the teacher candidates' responses to the questionnaire revealed several perspectives. Six candidates said their views of the community did not change as a result of doing the WebQuest. Of these candidates, four already believed that the communities were resource-filled places, while two candidates' retained their negative views of the communities. One of these teacher candidates wrote, "I usually like to see new things for new ideas and motivation but here in this community, resources are very limited not giving the students a reason to further explore their environment." However, 12 of the teacher candidates who responded to the questionnaire stated that their views changed positively as a result of the

project. (Three of the candidates did not address the question directly as to whether their views changed.)

Given the objectives of the WebQuest project, it was not surprising that the majority of the candidates came to realize that the community had many resources. One candidate wrote, "I learned that the community lends itself for any different discussion and research topics. By integrating prior knowledge, technology, and the community we are able to provide a wonderful experience to our students." Completing the WebQuest helped this student learn how to integrate previous knowledge, technology, and the community's resources for the benefit of the elementary school students. Another teacher candidate agreed, writing:

> As a future teacher, I can use the community and incorporate it to my lessons and content areas. I always knew the community is important because that is what the students know best. Now I know how to incorporate the community in the classroom for lessons and activities.

The WebQuest project helped the above teacher candidate understand how to leverage the knowledge from the community to the classroom. Furthermore, candidates learned that the community was a positive influence on the students—a realization that counters deficit perspectives of Latino/a communities, as stated by another candidate:

> I learned that there [are] many funds in the community the children live in. The resources can be inexpensive and often more valuable than other outside help. Although the community looks different than mine, I found the community to [be] a positive influence on the students.

The teacher candidates also wrote specifically about the importance of teachers connecting with their students' communities for the benefit of the children. One candidate wrote:

> Now, I put more attention to the details in the community. I'm observing everything. I never thought that the community was necessary to make connections with the kids, but now I know that we need to observe and get information about the community we are going to work with.

This candidate underwent a change of perspective after working with the community. Another understood the importance not only of teachers making community connections but also recognized that forging links to communities should be a school-wide endeavor. She wrote, "I did not expect to find educational material in the gas station, restaurants etc. When I visited some shops I saw with a new perspective how the school can connect with the community." The teacher candidates understood that by making connections with the communities they could better connect to their students. Those potential relationships could also afford an important way to motivate their students, as a candidate wrote, "I learned that in order to motivate students we need to know where they come from and what things they're familiar with."

In addition to learning about the resources in the communities for use in schools and classrooms and to making important school-community connections, the teacher candidates learned about other issues that were important to their students' communities. One teacher candidate, for example, learned that many of the students' parents had jobs in the community. They also learned about issues negatively impacting the community, such as pollution:

> I learned that the community is impacted by the construction of railroads through their neighborhood. Trains give off gas emissions also that pollute the air

> surrounding the area...They [people] also need to exercise caution around the railroad tracks.

The WebQuest neighborhood assignment afforded some candidates the opportunity to visit their students' homes, which led to raising their awareness of some of the challenges their students faced. One teacher candidate wrote:

> I learned that although electricity should be available to all, it is not…I visited the home of one of my students whose house was very dark because they could not afford proper lighting for their house. They had one low watt bulb to light the kitchen and dining area. But that was not enough because it looked dark and grim. They also did not have a way to heat the house during the winter.

Hence, some of the teacher candidates were motivated to go beyond the assignment's requirements and explore the neighborhood further, where they learned about the daily challenges that could negatively influence their students' educational experiences. In this way, the candidates learned about how certain environmental and economic inequities affected the children and their families.

The candidates' explorations of the communities led some of them to identify with the communities around the schools were they conducted their fieldwork. One teacher, who identified with the community because it reminded her of her own, wrote that "The community is much like the community that I grew up in because there are a lot of Hispanic residents that care about their roots." Another candidate shared, "When I first went out to the community, I was a little nervous because I had never been out to that area.... As a result of this WebQuest I feel like I belong to this community. To me the only thing that changed was that I feel like I grew up in the community." Hence, this candidate came to experience feelings of belonging to the

community. Most of our candidates either already believed that the communities were resource-filled places or they came to see the neighborhoods positively as a result of the project. For example, one candidate wrote, "Now I am going to actually look at the community differently. I am going to use it as one of my primary sources when creating a lesson." Another woman wrote, "[H]istory in that community is very rich and goes far back into history. I saw that community as poor but now I see that community as rich, maybe not monetarily but definitely rich in other ways." Hence, the teacher candidates had varying reactions to their Community WebQuests, but the majority either retained their positive views of the communities or came to have positive views.

Discussion

An important aspect of the design of the Community WebQuest was to promote the bilingual teacher candidates' cultural understandings, awareness, and appreciation. As conscious educators, we understand that the Latino/a ethnic background of our teacher candidates does not necessarily mean that they do not need multicultural training along with math and science training. Indeed, Cavazos was motivated to design the Community WebQuest and include it as one of her course requirements because of the "cultural gap" between the traditional WebQuests and the Latino/a and English Language Learner students. Moreover, we know that educational researchers continue to grapple with cultural discontinuities between schools and culturally and linguistically diverse communities, including Latino/a communities (Nieto, 2004).

While the teacher candidates gained much from the WebQuests, our analysis of their chosen topics, as previously discussed, included links to restaurants and shops. In addition to the restaurants and shops, students linked their WebQuest projects to a *tortillería,* a *paletería,* and a *panadería.* The propensity of the teacher candidates' to choose food-related items and places

brings to mind the problem of the reductive view of culture, particularly Latino/a culture as being "food, fun, and fiesta." Often, schools and classrooms teach or incorporate culture around holidays or celebrations and the foods stereotypically associated with those events. While culture does include holidays and celebrations, it is much more than that. Culture refers to the values, beliefs, norms, language, ideologies, and worldviews of a group (Gonzalez, 2001). This raises the question of how to more effectively weave issues of culture into math and science teacher training so teacher candidates will to develop deeper understandings of what culture is in their students' communities and bridge school and home and community cultures. Assignments like the Community WebQuest projects are important tools in the education of teachers to develop cultural efficacy, but are just the tip of the iceberg.

Another important issue is that two candidates out of twenty-one retained deficit views of the working-class communities around the schools. It is important to recognize that for some Latina/o bilingual teacher candidates, the Community WebQuest project may not be enough to change deeply entrenched perspectives. However, for the majority of those questioned, the requirements to spend time, observe, and collect ethnographic data in the communities made a difference. By continuing to require students to engage in community fieldwork, we can continue to dispel negative views of Latino/a communities.

Conclusion

This research demonstrated that the Community WebQuest project served as a learning tool for the Latina/o bilingual teacher candidates. On one level, the teacher candidates were able to design a project through instructional technologies in the completion of WebQuests that could serve them in the classroom. On another level, they themselves learned math and science content as they researched their topics. Most significantly, the majority of those questioned learned to see

Latino/a communities, especially working-class communities, with different eyes. Going out into the communities afforded the opportunity for this shift to take place. They learned to seek out and find mathematical and scientific knowledge in the communities and to leverage this for learning in the classroom. The teacher candidates learned much about their students and the communities in which the students lived, including how to use community resources to motivate students in the classroom and to build better relationships with them. The teacher candidates were also able to witness environmental and financial disparities that gave them greater insight into the challenges faced by working-class immigrant students. Equipped with asset lenses, the preservice bilingual teachers can better challenge deeply entrenched deficit views of Latino/a communities and can better meet the needs of their ELL students.

Furthermore, some of our students have similar backgrounds and grew up in similar communities as their Latino/a students. Thus, their involvement in the WebQuests projects may validate their own experiences and communities. Clark and Flores (2001a & b; 2004), for example, have found that pre-service teachers' own immigrant identities and backgrounds can ultimately influence their pedagogies and educational philosophies. However, such identities and backgrounds are rarely validated as significant tools in the teaching and learning of immigrant students. Innovations in the teacher education curriculum such as community WebQuests can help both teacher educators and the preservice teachers themselves better tap into their identity and backgrounds to inform their pedagogy in beneficial ways.

This research has implications for how colleges of education prepare teachers who teach math and science to work with culturally and linguistically diverse communities. It is imperative that teacher education programs equip teacher candidates with the tools needed to identify and use knowledge and resources from their students' communities, particularly for working-class

and immigrant students and students of color who have historically been underserved by our nation's public schools. Doing so can help teacher educators address cultural discontinuities between homes/communities and schools. In addition, the project has implications for working with bilingual Latina/o teacher candidates. They too need to be urged and supported to engage more deeply and more positively with the Latino/a communities from which their students come. Doing so will help them understand not only their students but also themselves.

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