

· 1 1 ·

Faculty Views of Underrepresented Students in Community College Settings Cultural Models and Cultural Practices

Leticia Tomas Bustillos, Robert Rueda, & Estela Mara Bensimon

Research shows that instructor, instruction, and educational process in the classroom affect 25 percent of the student outcome. 50 percent comes from who they are including genetics and the rest of the 25 percent depends on the socio-economic status of the students. This means that some students are doomed to failure when they come in. They have no motivation in them to succeed and they have no background in the first place. We affect such a small amount.—Professor, California Community College

Many readers will find this community college faculty member's quote as disturbing as the authors do. It represents a view that we have often heard, in different versions and with different levels of intensity, in our work in community college settings. It is often heard in reference to students of color, who frequently enter

community colleges less prepared and who often fall behind their White peers on a wide range of academic outcomes. It represents a perspective of resignation, of hopelessness, and lack of efficacy and of agency in being able to impact student outcomes because of factors beyond one's control. It raises a host of issues, including the question of who is responsible for student success at the college level.

What role can or should students play at this level of the education system? What role can or should faculty play at this level? It is clear that the educational system expects more from students once they leave high school, including basic academic skills as well as increased levels of independence, self-regulation, motivation, ability to set realistic goals, and so on. It is also the case that significant numbers of students enter community colleges without these skills and abilities, and they are commonly found in the remedial courses that are required of under-prepared students in order to enter credit-bearing coursework. One possible response, as a faculty member, is to resign oneself to not being able to make a difference. However, another possible response is to assume a role with more agency and accept students as they come, moving forward from that point.

The role faculty members play in student educational outcomes is frequently overlooked in research in higher education, perhaps because more is expected of students when they approach adult age. Instead, a voluminous literature based on college student surveys correlates postsecondary education success with students' characteristics before they entered college and their self-reported experiences, behaviors, and accomplishments during the college years. Rarely are the institutional representatives themselves— faculty and administrators—given attention in terms of how they may or may not contribute to student success (Bensimon, 2007). At the same time, it is important to keep in mind, as Portes (2005) convincingly argues, there is a whole host of factors, including structural and financial factors that produce inequalities in educational outcomes and that merit attention. Moreover, the accountability issue, which has gained such prominence in the national education agenda, is not trivial, especially in light of the accountability problems that have plagued K-12 education (Nichols & Berliner, 2007; Orfield & Kornhaber, 2001) and the long-term impact they have on post-secondary outcomes. These problems include, among other issues, onerous testing requirements that rely on narrow measures, reshaping the curriculum to match those tests, negative views of teachers and school, and punitive approaches to bring about improvement.

We do not minimize the role of these factors, and we agree that they deserve attention. Even so, we certainly do not argue for importing any of K-12s problematic practices to higher education. Nor do we think faculty and administrators should be targeted or blamed for poor student outcomes. On the other hand, we do believe that faculty and administrators are an important part of the higher

educational ecocultural system and can make a difference. As such, in our work we examine one piece of the equation that has received little attention, the role of faculty and administrators in closing the equity gap in higher education outcomes. In the interest of promoting more equitable outcomes in higher education, we have focused on how we can assist community college faculty to reframe their interpretations of the causes for racial inequities in educational outcomes so that instead of attributing student performance to factors such as the genetic makeup or social background of students, they will examine their own practices as well as those at the institutional level. Researchers at the Center for Urban Education believe that in order to address the problem of inequity, institutions of higher education need to recognize that their practices (e.g., curricular, pedagogical, relational, administrative, and so forth) are failing to produce successful outcomes for Latinos and Latinas (or other minority populations) and that in order to learn why their practices are failing to accomplish equitable outcomes they have to engage in a process of guided critical inquiry (Bensimon et al.). To facilitate the process of learning and change among institutional actors the Center has created special tools and structures.

This chapter focuses on this approach specifically—promoting equitable outcomes in higher education by helping institutional actors examine the extent to which their views and actions can promote or impede student success. We focus on community college settings because they are the initial step in the pathway to higher education for the nearly 6% of Latino students (National Center for Education Statistics, 2008) in the United States who fare less well in terms of educational outcomes than other groups. The institutional change process that characterizes the work of the Center for Urban Education is informed by five theoretical strands: socio-cultural theories of learning, organizational learning, practice theory, participatory critical action research, and critical theories of race. In this chapter, we describe our application of sociohistorical perspectives on learning to foster change in community college settings related to how faculty view and address the problem of inequity. We both argue for broadening the range of factors seen as responsible for Latino/a student outcomes in these types of settings and illustrate how the sociohistorical principles and theory can be applied to bring about changes in faculty that have the potential to impact the educational outcomes of underrepresented students.

Background of the Problem

While the demographic profile of the country is shifting, the patterns are most pronounced in some states such as California. In California's public K-12 schools, over 40% of students (2.6 million) come from households where a language other

than English is spoken (Rumberger, 2007). Among Latino students, 25% complete the A-G course sequence, an indicator of college readiness (California Postsecondary Education Commission [CPEC], 2008). For many of these students, the pathway to higher education is characterized by community college attendance as a stepping-stone to four-year universities (Solórzano, Rivas, & Velez, 2005; Woodlief, Thomas, & Orozco, 2003). A significant factor for this trend is the high cost of higher education, which inordinately affects students from lower socioeconomic groups (Horn & Nevill, 2006; NCES, 2008).

Unfortunately, there is a long-standing pattern in higher education in which students of color from low socioeconomic backgrounds achieve at lower levels than their White peers. Not only do fewer students make it to higher education, but once there, they are more likely to be in remedial tracks and to transfer to four-year universities at lower rates (Attewell, Lavin, Domina, & Levey, 2006; Swail, Carbera, Lee, & Williams, 2005). In California, nearly 23% of Latino students transferred to the University of California (UC) or the California State University (CSU) systems, whereas 35% of white students did the same (CPEC, 2008). Of the entering Latino freshmen at the CSU's in the fall of 2009, 52% and 63% required remediation in math and English, respectively. This rate is nearly double that of Asian and White incoming freshmen requiring remediation in the same subjects (CSU, 2010). There are many indicators that suggest community college attendance and participation are stratified by students' racial-ethnic and socioeconomic backgrounds (Horn & Nevill, 2006).

These patterns point to the community college system as an important link in the higher education chain, especially for non-White and poor students; however, there are unequal outcomes for many of these students compared to their White counterparts. This combination of factors was the impetus for the work described in this chapter, specifically the creation of the *Math Project* housed at the Center for Urban Education (CUE) at the University of Southern California. A major goal of this project was the promotion of equity-mindedness and equity-focused practices within the community college setting with a particular focus on faculty. In this project, and in related action research (see Bensimon, Polkinghorne, Bauman, & Vallejo, 2004; Bustillos, 2007; Peña, 2007), "equity" was defined in terms of student outcomes (Dowd, 2005) rather than demographically representative enrollment.

There is a long-standing history in educational research in which student deficits are seen to be the primary factors related to inequitable outcomes. These explanations, often with little empirical foundation as the opening quote illustrates, have ranged from inadequate prior education, students' and family's lack of resources, deficits in prior knowledge, poverty, low motivation, low intelligence, language differences, and other factors (Valencia, 1998). Sadly, a common ten-

dency is that an exclusive focus on these real or imagined deficits leads to lower expectations and to low-level or remedial instruction.

While it is clear that students arrive at college with differing opportunities to learn histories (i.e., varying amounts of exposure to factors which are related to school success such as economic resources, access to print materials, and so on), these are typically issues that cannot be easily addressed in the classroom. However, a major premise of our work is that it is also true that faculty and educational institutions *can* impact student outcomes through changes in their routine practices and by taking ownership of the problem. A major problem is that these types of changes are not easy to bring about, and there is often little existing scaffolding to foster them.

Background and Goals of the Math Project

The Math Project emanated from the Center for Urban Education (CUE) at the University of Southern California. A major goal of the Center is to address inequitable outcomes in community college settings (Bensimon, 2004, 2005, 2007). The work we describe here is from one of the campuses that participated in a CUE-sponsored project focused on the area of mathematics. Previous work at this campus confirmed the patterns noted earlier, specifically low achievement for Latino students, their excessive representation in remedial courses, and a strong reluctance on the part of faculty and administrators to openly discuss or address issues of equity, race, and ethnicity. While previous work from CUE suggested that colleges regularly collect outcome indicators related to equity issues, they were rarely shared, were often not in a user-friendly form, and were not used in a proactive fashion to address equity issues. The issues we noted at the beginning of the Math Project could therefore be summarized as follows:

1. Inequitable outcomes were a problem (as recognized by the institution itself).
2. The problem of inequitable outcomes was especially pervasive within the math remedial course sequence.
3. Faculty often perceived these remedial courses as lower status courses and attributed student failure to within-student deficits (low motivation, low SES, lack of basic skills, or lack of ability).
4. While equity was an important issue, faculty most often felt that there was not much they could do to impact it.
5. While the school routinely collected data on student outcomes, this information was not used to address issues of equity, and was perceived to be primarily for administrative purposes.

6. There did not exist an “institutional culture” of focusing on equity, nor was there a physical or intellectual “space” in the institutional for such a focus.

The project thus targeted these areas directly. A general overall goal was to foster a view of inequalities in outcomes, at least in part, as a problem of institutional accountability that calls for collective action. A specific goal of the project was for faculty to “take ownership” of the problem and look for ways that they could modify their professional practice to improve student outcomes. The project team, consisting of faculty members and administrators, had to therefore come to understand that taking ownership did not mean understanding inequitable outcomes in general, but recognizing inequitable outcomes at their own campus and in their own department. Thus, gaining expertise in accessing, understanding and asking questions of relevant data (what we called “sense-making”) was an important element of the project. A collaborative action research approach (Bray, Lee, Smith, & Yorks, 2000) was adopted with the overall goal of creating a community of learners around the issue of student outcomes in math, fostering equity-minded¹ sense making of institutional data related to issues of equity, and considering ways to build on professional practice to foster these goals.

Theoretical Framework

In thinking about how to engage faculty in the goals of the project, we found ourselves falling into the trap of attributing the same characteristics to them as they did to the students who failed math—low motivation, lack of relevant knowledge, and so forth. We therefore began to think systematically about how socio-historical principles could provide guidance. We quickly recognized that traditional approaches focused on lectures about equity and encouragement to engage in culturally responsive practices, characteristic of traditional “professional development” were doomed to failure (Brancato, 2003; Cranton & King, 2003). Thus, the Math Project intentionally built upon several sociohistorical traditions within an action inquiry framework.

A fundamental goal of our work with this institution was the collaborative construction of new knowledge and new practices for both individuals, as well as the institution related to fostering equitable outcomes for Latino students. The major premise was that learning and development are socially constructed and facilitated by engagement in a joint productive activity. We organized team meetings with the College we worked with (described below) as the primary vehicle of change. While the overall goal focused on fostering more nuanced understandings and cultural practices related to equity, the collaborative work that we used

as a foundation for this work centered around participants' understanding and examination of their own institutional data related to equitable student outcomes. The meetings and artifacts around this work then became the vehicle for exploring existing knowledge and creating new knowledge around equity issues.

In this work we drew heavily from sociohistorical psychology related to teaching and learning, built on the early work of Vygotsky (Forman, Minick, & Stone, 1993; John-Steiner & Mann, 1996; Kozulin, Gindis, Ageyev, & Miller, 2003; Lave & Wenger, 1991; Moll, 1990; Rogoff, 1991; Rogoff, Turkkanis, & Bartlett, 2001; Tharp & Gallimore, 1988; Wenger, 1998; Wertsch, 1998; Wertsch, Del Rio, & Alvarez, 1995). While there is variability in the family of perspectives, under the broad label of cultural-historical approaches, general features we drew on were the ideas that (a) learning is social, (b) learning is socially mediated by assisted performance that is responsive, (c) learning is mediated by cultural tools and artifacts, and (d) learning takes place in communities of practice and is indexed by changes in participation within these communities. We viewed the collaborative team meetings (to be described below) as teaching and learning situations, where a goal was to develop expertise as well as new ways of talking about and interacting with both institutional data as well as equity issues.

A particularly important extension of sociohistorical work for the current project was the idea of communities of practice, defined by Wenger (1998) as a social group developed over time through ongoing purposeful endeavor. These communities of practice can be formal or informal "groups of people who have some common and continuing organization, values, understanding, history, and practices" (Rogoff, 2003, p. 80). It is within these communities that learning takes place and individual identities, meaning, and social belonging are created. These communities of practice help shape what Gallimore and Goldenberg (2001) describe as cultural models, or shared mental schemata or normative understandings of how the world works, or ought to work, including what is valued and ideal, what settings should be enacted and avoided, who should participate, the rules of interaction, and the purpose of interactions. In this project, we intentionally tried to develop a community of practice around equitable practices in the instruction of mathematics.

We also drew on applications of sociohistorical theory to the areas of intercultural exchange in border and boundary crossing and to area literacy studies, in particular the notions of hybridity and re-mediation (Gutierrez, Morales, & Martinez, 2009). We were particularly interested in bridging the relatively sterile academic model of teaching and learning mathematics instantiated in many of the remedial math classrooms with the everyday lives of students who have few economic resources, poor academic preparation, and little of the social and cultural capital most valued in the academic world.

We also drew on related work in the Cultural Historical Activity Theory tradition (CHAT) (Cole, 1996; Engström, 1987), which allowed us to consider the nature of the activity settings that existed in the department as well as those that we attempted to create in the team meetings (described later in the chapter). The learning “unit” is not the individual, but the individual in a specific social context. Activity settings can be seen as the “who, what, when, where, why, and how” of the routines which constitute everyday life—in essence, a more elaborated version of what we commonly call a social context (Cole, 1996; Engeström, 1987; Engeström, Miettinen, & Punamäki, 1999; Tharp & Gallimore, 1988). The specific components of an activity setting include subjects (participants), objects (the goals participants are trying to achieve), tools (the forms of mediation available in the setting, which can be symbolic like language or concepts, or more tangible like physical artifacts), community, rules, and division of labor. The community refers to the specific community formed by those participating in the setting, but also the connections to the various extended communities with which they are associated. A major target of the Math Project was to create activity settings that did not currently exist, namely intellectual and physical spaces that focused on equity related issues and ownership of the problem of underachievement.

Finally, building on this CHAT tradition, we drew on the notion of “re-mediation” (Cole & The Distributed Literacy Consortium, 2006; Cole & Griffin, 1983; Gutierrez, Hunter, & Arzubiaga, 2009). Simply put, a re-mediation approach suggests that new learning is fostered when the means of mediation and cultural tools are changed, in stark contrast to traditional notions of remediation that seek to address learner deficits. This view suggests that learning and development are a complex result of one’s interactions with others mediated by cultural tools and artifacts, both physical and symbolic, including language. When cultural tools are encountered in the environment, people do not interpret and act on them directly but rather through the mediation of how those tools are used by others. For example, a child learns the uses of a fork as a part of joint activity—by watching others use utensils during a family meal, by listening to their words (another kind of tool) in describing different utensils, and perhaps by becoming involved in the joint activity of dinner. Thus, as part of our project, we introduced new cultural tools and artifacts that were both material (among others, protocols around how to understand institutional data as well as tools to collect and use their own data) and symbolic (for example, new concepts and language).

In the following paragraphs, we elaborate on how we have drawn on these theoretical notions in the implementation of the project.

The Math Project

The Math Project was a nearly two-year endeavour spanning from 2004 to 2006 that sought to refocus institutional concern from student deficits to one of institutional responsibility. Funded by the James Irvine Foundation, the Math Project provided six mathematics faculty members at California Community College (CCC) with a structured opportunity to study and discuss the myriad reasons for the persistent underachievement of Latino students enrolled in remedial mathematics courses. Specifically, the Project enabled faculty members to consider alternatives to their assumptions about underachievement by placing their own belief systems within the heart of inquiry.

California Community College was the site for this project, a large community college in the Southwest serving close to 17,000 students annually. The college offers 59 Associate of Arts/Science degree programs, 71 Career Certificate programs and the opportunity to complete up to two years in any of 58 baccalaureate programs for transfer to a four-year college or university. The college serves a diverse student population where Latino students made up 40% of students enrolled between 2004 and 2006, the years of the project. Students identifying themselves as Asian, Pacific Islander, and Filipino were 22%, White students 24%, and Black students represented 11% of the student population enrolled at CCC at the time of the project.

In December 2000, CCC was invited to participate as one of the partner institutions in the Diversity Scorecard Project because its student body demonstrated ethnic diversity. The Center for Urban Education purposefully invited colleges that were not struggling to diversify their student population so that the focus of the team would be on *student outcomes* rather than increasing diversity. Data from 2000 at this campus indicated that African American and Latino students had not attained a commensurate level of success compared to their Asian and White peers in critical pathway mathematics courses. However, institutional policies and structures were not in place at CCC that would enable institutional decision makers to undertake a systematic investigation into the persistent disparities between ethnic and racial groups in these courses.

Building on the previously described framework, the Math Project utilized a “practitioner-as-researcher” model in which practitioners took on the role of researchers, and researchers assumed the roles of facilitators and consultants. The practitioner-as-researcher model has elements of community (Smith, 1999), collaborative, and participatory action research (Bray et al., 2000; Stringer, 1996) in that the *purpose* of inquiry is to bring about individual and institutional change. The primary approach of the Project was to facilitate the regular and systematic interaction of researchers working as facilitators engaged with insider teams of practitioners in a process of collecting data and jointly *creating knowledge* about

local problems related to equitable outcomes. The general purpose was to scaffold participants' construction of new knowledge about their own institutions that could then be used to bring about institutional change.

The practitioners involved in the work at the college setting were key players in the institution's formal learning systems and/or were viewed as key actors in informal institutional networks. Team members came from a specific department (Math) and were self-selected. The team was diverse, with White, African American, Latino, and Armenian faculty members present. In addition, other instrumental team members included the institutional researcher who provided data for discussion and analysis as well as the Learning Outcomes Coordinator.

The general process engaged team members in a series of meetings that initially revolved around "vital signs" (indicators of student degree progression and student outcomes that include academic pathways, retention, transfer readiness, and excellence). This work then quickly proceeded to the examination of "fine-grained measures" of the same types of indicators. An important difference between the vital signs and the fine-grained measures is the fact that the teams themselves selected the latter indicators and requested that they be provided for discussion to the team by the institutional research office. The process of defining the indicators and specifically requesting the data was designed to foster a sense of agency and to promote problem framing, ownership of the assessment results, and general data literacy around issues of equity.

There were specific cultural tools which were introduced within these specialized activity settings. For example, the Project provided access to special artifacts such as data sheets, "vital signs" protocols, interim reports templates, an equity index formula, and examples of graphic displays to help make data easy to decipher. The Project also introduced specialized vocabulary and concepts such as the differentiation between diversity and equity; deficit, diversity, and equity perspectives on institutional data; data vs. inquiry approaches to data; and the notion of global vs. local knowledge. Evidence teams met at least once a month for at least two hours. The team meetings served a "mediating" rather than a directive function in this respect. Rather than trying to change attitudes and practice directly, which emphasizes individual learning, the goal of the team meetings was to change the nature of the mediation and cultural practices that participants had at their disposal.

By creating communities of practice around equity, we attempted to help participants create new identities and new meaning or "sense-making" around issues of equity on their own campuses and in their own classrooms. In essence, we attempted to "re-mediate" thinking and practice around equity. In this context, then, re-mediation refers to changing the nature of mediation available to participants in the setting, rather than to the deficit-based connotation used to

refer to compensatory programs and practices. Project researchers provided strategically assisted performance to the teams. Since learning was seen as social and mediated, we tried to reorganize key features of the social interaction and provide new cultural tools and artifacts and ways to use them (such as institutional data along with the strategies for becoming informed and critical consumers). Before the Project, there was no institutional “space” for this type of work, and thus it did not occur.

A Project researcher and at least one research assistant were present at each of the scheduled team meetings. Each of the team meetings over the 18-month period was transcribed for analysis. In addition, field notes from all contacts between project staff and team participants were kept. These contacts included records of formal meetings, informal meetings with individuals or subgroups of team members outside of the team meeting setting, phone calls, emails, and so on. In addition, all relevant documents that provided evidence of impact were kept for analysis. Finally, after the end of the formal project and the termination of formal team meetings, project staff continued to carefully document the participants’ reports about their interactions with other people outside of the team meetings, their comments about institutional and organizational factors related to the project, and our own observations about institutional changes in activities or changes in practice or policy that took place and that could be directly attributed to the project, most often by the participants’ or others’ (e.g., administrators’) reports.

An Overview of Outcomes

It is useful to briefly summarize the major patterns that emerged related to participation in the team meetings. These can be briefly summarized as follows:

1. Most team members believed data were essential, but few had the skills to examine it critically and ask relevant questions and use it as a tool for action. The process provided a context and setting for all evidence team members to engage in data-based inquiry and make sense of student outcome inequities revealed by examining disaggregated student outcomes data.
2. Institutional researchers often saw their role as a technical activity rather than as helping others understand the data, ask questions of the data, or be proactive in looking at new data. The process assisted the institutional researcher to reconsider the formal role to which she was socialized and to view her role and that of the faculty as “teachers” and “facilitators” of data-based inquiry rather than as “gatekeepers” of information.

3. Leadership was not necessarily found in one individual, rather it was most often “distributed” among different members at different points in time. The most important leadership skill was being able to facilitate learning and equity mindedness by encouraging critical dialogue surrounding issues of race/ethnicity.
4. Many patterns of student outcome inequities may remain hidden without systematic “unpacking” of the data that already exist. The disaggregation of data helped to bring otherwise concealed inequities to the surface, thereby allowing evidence team members to better recognize these patterns.
5. The majority of the members of the Math Project were faculty members and were involved in frank discussions about subjects that were uncomfortably related to race, ethnicity, and equity. They were asked to reflect on the condition of equity on their campus and to share aloud what they believed to be the factors that contributed to the preponderance of Latino students in remedial mathematics courses and their lack of achievement. They were likewise asked to state their assumptions about students and to thoroughly articulate how they came to those conclusions with the intent to draw out deeply held beliefs and suppositions.

A major accomplishment of the Math Project was that it was able to create a previously non-existent activity setting with a specific focus on equitable student outcomes, and also the development of a new community of practice that did not previously exist.

In our analysis of the data, we found that team members displayed increased knowledge about their roles as instructors and more positive attitudes about indicators and equity. The following quote from a team member illustrates this point when she said, “So with this project, it’s allowing me to get more of the student perspective opposed to our assumptions [because there is a big difference.” Another team member noted:

I think the project provides some time and space for us to look [at the data] in addition to the information that we gather from the students. But in addition to that we, at least we spend some time looking at what it is that we’re doing, what is going on also [in the classroom] because we never get to talk about that unless we do a retreat as we did a couple of years ago.

Qualitative analysis of meeting field notes and transcripts revealed that early in the Project, members of the inquiry team were alarmed by the institutional data that showed high rates of enrollment in remedial courses, significant gaps in transfer rates and degree attainment for Latino students. Prior to the Project, these “discoveries” were known about in an abstract way, informed more by anecdote rather than data, and as such, the extent of the inequities was not fully

grasped by evidence team members. These findings were explored over the course of the project with the assistance of the data tools provided by the project. This new knowledge created within the team meetings became the impetus for team members to move their efforts beyond the confines of the team itself. Team members conducted both quantitative and qualitative inquiry activities to further understand the inequities persisting on their campus as made evident by the data. First, team members administered the LASSI, a diagnostic assessment of student strengths and weaknesses in 10 areas, so as to better gauge student attitudes, motivation and study skills to name a few. Second, using the results of the LASSI, team members devised an interview protocol they used with a select number of students enrolled in both remedial and advanced math courses to understand what happens inside and outside the classroom from the students' perspective. As a result of the combination of activities, team members were able to partially redefine their roles as faculty and administrators, including the ways that they interacted among themselves and in the larger campus around issues of equity.

At the conclusion of the Project, team members were able to move beyond this technical focus and significantly expanded the scope of their inquiry activities. Team members talked about how they planned to share the information they gathered with the rest of the Math Department. Moreover, there was the hope that additional math faculty would engage in similar inquiry activities to gain a better understanding of student experiences both inside and outside of the classroom. Having these qualitative data, team members believed, would challenge previously held assumptions about students and move them from a student deficit perspective. Reflecting on her interviews, a team member observed:

And, you know, it's just hard for me to accept the fact that students, you know, they're just lazy, things of that nature, cause I really don't think that. That's not the main problem with students. I just think that every situation is different, everyone's work environment [and] home environment is [sic] different. So maybe they just need a different master plan 'til the system can be successful.

Above all, engaging in further inquiry activities meant that team members came to understand that no "magic bullet" exists to improve outcomes, but rather that change takes time, is deliberate, and often occurs in small, incremental steps.

Conclusion

The overall design of the Math Project assumed that individual change is socially fostered and also leads to institutional change. Thus, fostering individual equity-minded thinking and practices is seen as a stepping-stone toward changing institutional practices and culture and ultimately improved student outcomes.

One problem with existing frameworks that address either one or both of these goals (changing individuals or changing institutions) is that they focus *exclusively* either on individual processes or else institutional factors. The socio-historical framework allows for a larger unit of analysis that includes both of these dimensions and thus helps to bridge and situate individual behavior and cultural practices to institutional ones. In essence, it situates individuals within specific communities of practice and incorporates not only individual goals and mediational means but cultural norms and institutional goals as well.

An important change principle derived from this framework is that changes in any aspect of the activity setting can produce changes elsewhere in the system. Thus, by introducing new forms of cultural tools (for example, new ways of talking about and concepts for thinking about inequitable student outcomes, or data tools to track equity), it was possible to document changes in the larger system. The Math Project, in many ways, has served as an influencing agent for subsequent projects. Faculty at City College, for example, who were part of the Equity Scorecard Project (2007–2008), noted inequities among their African American student population enrolled in mathematics and shared this information with the Math Department. Consequently, the math faculty formed a Math Evidence Team that was modeled after the Math Project to explore the possible reasons for the underperformance of African American students in math through further data inquiry.

What began with the Math Project at one institution has yielded new communities of practice at other institutions with new goals focused around equitable outcomes. The division of labor related to making sure equitable outcomes are produced has shifted so that previously uninvolved actors and academic units are sharing the responsibility. The traditional roles that have separated coordinated efforts have begun to break down, particularly in the area of faculty and key staff (for example in the area of transfer and counseling), and are becoming less rigid. As these institutions begin to incorporate new cultural tools (equity-minded discourse, tools for unpacking and examining student outcome data, and so on), new activity settings are created such as a Transfer Academy at one of our partner institutions that serves to promote student success over time. In essence, new knowledge and understandings about the issue are being socially constructed and are serving as guides to future action.

While it is possible to think about producing changes in behavior by trying to change the behavior directly, through didactic or similar means, such an approach focuses only on individuals and also leaves several levels of learning unaccounted for. Consistent with the notion that learning is socially constructed, the Math Project incorporated a perspective that focused on a unit of analysis larger than the individual actors. Thus, rather than adopting a didactic instruc-

tional approach, the Project instead changed the nature of the mediation available to the team participants and also created a special activity setting (team meetings) that allowed the creation of new, situated knowledge leading to a critical and proactive stance toward institutional change. The active ingredients that appear to be critical thus include (1) creating special activity settings that help form new communities of practice, (2) situated learning, and (3) data-driven inquiry. The framework adopted here therefore is useful not only in how to change individual and institutional cultural norms and practices but where to look for that change as well.

ACKNOWLEDGMENT

This chapter builds on data excerpted from the dissertation *Exploring Faculty Beliefs about Remedial Mathematics Students* by the first author. The authors are affiliated with the Center for Urban Education, Rossier School of Education, University of Southern California, Los Angeles. The Diversity Scorecard Project was funded by The James Irvine Foundation, and Estela Mara Bensimon served as the Principal Investigator. The authors are grateful for the collaboration of colleagues at the community colleges involved in the projects, and to Professor Alicia C. Dowd, co-director of the Center for Urban Education for her intellectual contributions to this paper. Correspondence concerning this article should be addressed to Robert Rueda Rossier School of Education, University of Southern California, WPH 601B, 3470 Trousdale Parkway, Los Angeles, CA 90089 (Email: rueda@usc.edu).

ENDNOTE

- 1 Throughout the chapter, the words *equity-minded*, *equity-mindful*, and *equity-mindedness* reflect the same meanings. These terms are used to describe individuals as well as institutional practices and structures.