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Toward a Theory of Generative Change in Culturally and Linguistically Complex Classrooms

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This article situates the preparation of teachers to teach in culturally and linguistically complex classrooms in international contexts. It investigates long-term social and institutional effects of professional development and documents processes that facilitate teachers' continued learning. Data from a decade-long study of U.S. and South African teachers supported a model of generative change that explained how professional development could be internalized by teachers, subsequently serving as a heuristic to help them organize their individual programs of instruction. Drawing primarily on two case studies, this article documents teachers' development of generative knowledge and illustrates how they drew on that knowledge in thinking about students and teaching. The results were to facilitate generative thinking on the part of their students as well.

National and international concern about changing demographics, inequities in the distribution of educational resources, and continuing underachievement for some students has stirred renewed interest in the quality and organization of instruction for students who are attending urban

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schools. The UNESCO Institute for Statistics (2005) reported that although half the global population now lives in urban areas, that figure is expected to rise to two thirds—or about 6 billion people—by 2050. In keeping with international tends, the National Center for Educational Statistics (2006) reported that by 2020, more than 50% of the U.S. public school population will be classified as students of color—from Latino, African American, Pacific Islander, and American Indian backgrounds. Since the beginning of the 20th century, urban classrooms around the globe have been experiencing the largest influx of students from diverse backgrounds. In general, these individuals initially settle in segregated local communities and receive schooling there. By the time those students reach secondary grades, however, previously segregated groups come together in classrooms with teachers who feel underprepared to teach students from cultural and linguistically diverse backgrounds (Hollins & Torres-Guzman, 2005). I use the term *culturally and linguistically complex classrooms* (CLCCs) to describe the learning environments that are created when these previously segregated groups come together in the same classrooms—classrooms serving students from two or more cultural and linguistic groups. Low academic achievement, high dropout rates, and low college graduation rates among low-income culturally and linguistically diverse students are far too frequent in these classrooms (UNESCO Institute for Statistics, 2005; Willms, 2006). One contributing factor to these trends is the disconnect between the backgrounds of the students and the teachers who teach them.

Although changes in student demographics have been dramatic, changes in the demographics of the teaching force have been slow. Most teachers continue to be monolingual and middle class. Many of the teachers who are assigned to teach a diverse student body in an urban setting are concerned because they lack confidence in their ability to do so, they feel uncomfortable interacting with parents from diverse backgrounds, they feel inadequately prepared to teach diverse students, and they prefer not to be placed in situations where they feel uncomfortable and inadequate (see Duhon & Manson, 2000; Hollins & Torres-Guzman, 2005). I propose that to address the cycle of student underachievement, we must increase teachers' knowledge of theory and best practices and their knowledge of students' cultural practices and values. In addition, we must assist teachers in replacing their feelings of insecurity, discomfort, and inadequacy with feelings of agency, advocacy, and efficacy.

Although an extensive body of research focuses on an array of topics related to preparing teachers for diversity (for syntheses of the research, see Duhon & Manson, 2000; Grant & Secada, 1990; Hollins & Torres-Guzman, 2005; Ladson-Billings, 1999, 2000; Sleeter, 2001; Weiner, 2000), few longitudinal studies—and even fewer cross-national longitudinal studies—exist on this topic because diversity has been neither a priority for funding agencies nor a focus of well-supported programmatic research (Hollins & Torres-Guzman, 2005). This article reports on data collected from U.S. and South African teachers in a longitudinal study of a teacher education course designed to instill

theoretical knowledge, pedagogical skills, metacognitive awareness, and positive attitudes in teachers—including a sense of agency, advocacy, and efficacy—concerning their work with diverse student populations.

Preparing Teachers for CLCCs

This study grows out of a larger program of research where the investigative site was the teaching and learning practices of U.S. and South African teachers in a professional development course and their subsequent work with students in CLCCs. The data were collected within the context of a cross-national longitudinal study conducted between 1994 and 2005 to better understand the influence of professional development on teacher change. In designing the research, I reasoned that the challenge of preparing an adequate supply of qualified teachers who were prepared to teach all students should not be narrowly conceptualized as a ghetto problem, an inner-city problem, or even as a national problem. It is, rather, an international challenge, and addressing it requires a better understanding of the processes of teacher change and professional development in cross-national contexts.

This investigation of teacher change took place in two parts. The first part of the research documented the process of teacher change that took place while U.S. and South African teachers were participating in a professional development course; the second part documented the teachers' continued learning after the course had ended (Ball, 2000, 2006). The analysis reported in this article was designed to advance knowledge concerning the social and institutional effects of professional development on teachers' generative change and to investigate the aspects of the professional development that affected the teachers' effectiveness in CLCCs. The central questions guiding this analysis were as follows: What is the role of generativity in the preparation of teachers to teach diverse student populations? How can teacher professional development be organized to facilitate the development of the generativity that is necessary for pedagogical problem solving? I propose that generativity is critical to the success of teachers in CLCCs.

I use the term *generativity* to refer to the teachers' ability to continually add to their understanding by connecting their personal and professional knowledge with the knowledge that they gain from their students to produce or originate knowledge that is useful to them in pedagogical problem solving and in meeting the educational needs of their students. According to Franke, Carpenter, Levi, and Fennema (2001),

> when individuals learn with understanding, they can apply their knowledge to learn new topics and solve new and unfamiliar problems. . . . Knowledge becomes generative when the learner sees the need to integrate new knowledge with existing knowledge and continually reconsiders existing knowledge in light of the new knowledge that they are learning. (pp. 655–656)

Building on this, I use the term *generative change* to refer to a process of self-perpetuating change wherein a teacher's pedagogical practices are inspired and influenced by the instructional approaches and theory that he or she is exposed to in a professional development program. That knowledge becomes generative when the teacher continues that learning by making connections with his or her students' knowledge and needs and begins planning the teaching based on what he or she is learning. Generative change occurred in this study as teachers integrated the knowledge they gained in my course with the knowledge they gained from their students in their pedagogical problem solving.

The analysis of the data revealed one distinguishing characteristic of effective teacher-student engagement in these diverse classrooms—namely, that as the teachers were developing their voices on issues of diversity and becoming generative in their thinking, they were building on the same instructional model that they experienced in my professional development course to inspire their students to become generative thinkers as well. I also found that as the teachers assumed the stance of learners, they began to talk to and listen to their students so that they could learn from them and use that knowledge in their student-teacher interactions and in their instructional problem solving to figure out how to meet the students' needs. This required the teachers to engage in generative change on an ongoing basis.

Professional Development and the Preparation of Teachers for Diversity

Borko (2004) noted that we are only beginning to learn what and how teachers learn from professional development and its impact on student outcomes. Adding to our knowledge base in these areas is Darling-Hammond and Bransford's focus (2005) on core knowledge needed for teaching; Franke and colleagues' work (2001) on school restructuring to encourage teacher reflection in generative ways; Desimone, Porter, Garet, Yoon, and Birman's work (2002) on the effects of professional development on teachers' instruction; and Sarason's work (1996) on creating school cultures that facilitate teachers' growth. However, this knowledge still needs to be applied to the preparation of teachers to work in CLCCs. I proposed that professional development programs that are designed to prepare these teachers must build on our knowledge of how people learn, be structured so that teachers reflect on their knowledge and daily practices in generative ways, focus on instructional practices that support their use of those practices in the classroom, and create cultures where serious discussions of educational equity take place regularly. I further proposed that teachers' strategic engagement with challenging theoretical perspectives, integration of action research in the professional development curriculum, ongoing work with diverse student populations, and use of writing as a pedagogical tool are additional features that should be integrated into the professional development program when preparing teachers for diverse classrooms.

Theoretical Framework for the Course

The professional development program that I designed centered on the use of narrative as a tool for developing teachers' metacognitive thinking. Many researchers have emphasized the importance of narrative in the human experience and consider narrative as the framework through which human beings comprehend life. It is the process by which we make sense of our experiences. Jerome Bruner (1994) asserted that culture "gives meaning to action by situating its underlying intentional states in an interpretive system" (p. 34; see also, Bruner, 1990) that includes narrative explication. He further posited that it is through narrative that people make sense of themselves and their world. A second and equally important function of narrative is that it can serve as an artifact through which to make actions, thoughts, and feelings intelligible to "others" (Said, 1978). The sharing of narratives with others can result in a facilitation of problem definition and resolution, and it can expand understandings of the practices of students and teachers in informed and sensitive ways. I conceptualized my classroom as a contact zone where the narratives of teachers' autobiographies and their students' literacy biographies could be used as tools for increasing metacognitive awareness of the centrality of critical literacies in teaching and learning. In addition, I used introspection to facilitate ideological becoming, and I used critique to facilitate internalization of new information. As teachers engaged in and used narrative to make meaning of new theory, they experienced an increased sense of agency, advocacy, and efficacy, as well as the emergence of their own voices. Later in the course, they used narrative to make meaning of their action research projects and to consider transforming action plans into practice.

Building on narrative as a tool for meaning making, the theoretical framework for the course was built around four concepts: metacognitive awareness, ideological becoming, internalization, and efficacy. According to Bransford, Brown, and Cocking (2000), the notion of metacognitive awareness refers to one's ability to think about his or her thinking, to predict one's performances on various tasks, and to monitor one's current levels of mastery and understanding. Teachers with high levels of metacognitive awareness can identify their barriers to learning, change the strategies they are using to attain their goals, and modify their teaching and learning strategies based on awareness of their effectiveness. Effective teachers are those who are metacognitively aware of their strengths and weaknesses and have a broad repertoire of tools and resources to assist them in attaining their goals. That repertoire includes a reconceptualization of their students as resources in the teaching–learning process.

Bakhtin's concept (1981) of ideological becoming suggests that the coming together of new perspectives, new ideas, and new voices is essential to a person's growth. According to Bakhtin, our engagement with the discourses of others can influence the way that we think, and it can contribute to forming what ultimately becomes internally persuasive discourses for us— thus influencing our ideologies, thoughts, beliefs, and ways of theorizing

49

about a body of ideas, their origin, and how they operate. The process of ideological becoming is critically important to the development of a sense of agency because it is through this process that individuals can begin to generate their own ideologies about teaching in diverse classrooms.

Vygotsky's concept of internalization (1978) was also critical to the design of the course. Internalization is a concept that emerges from sociocultural theory, which holds that learning and development occur on two planes (Wertsch, 1985). First, learning and development appear on a social plane, occurring between people as an interpsychological category; then they appear on an internal psychological plane, occurring within an individual as an intrapsychological category. In this course, the social process of engaging teachers with theoretical concepts and having them conduct action research on diversity and literacy-related issues in their classrooms became an internalized activity when they took personal ownership of the knowledge learned and then applied that knowledge to solve problems within their classrooms. Through this process of internalization, teachers began to develop a sense of advocacy with the assistance of more knowledgeable others. Vygotsky's discussion of internalization can help us to better understand how teacher learning and development occur—how the information presented to teachers in a professional development program can move from an interpsychological plane, where there is a social exchange in which more informed others encourage learners to consider conceptual innovations, to an intrapsychological plane, where these socially conscious classroom activities are embraced by teachers to become an internal catalyst that facilitates a sense of advocacy.

Influenced by Bandura's self-efficacy theories (1977, 1997), *teacher efficacy* refers to a teacher's belief in his or her potential ability to effect positive change in the lives of students. A teacher's sense of efficacy is critical to his or her effectiveness in the classroom. By design, the teachers in my course engaged with new perspectives, new ideas, and new voices through the assigned readings, through discussions and reflective writing, and through their required interactions with diverse learners to facilitate metacognitive awareness, ideological becoming, and internalization. Specifically, the intended outcome was that teachers who had these experiences through professional development would have an increased sense of metacognitive awakening, agency, advocacy, and efficacy in their CLCCs.

The Course as a Site for Studying Teacher Change

The first part of the research documented the process of teacher change that took place while U.S. and South African teachers participated in a professional development course designed to facilitate teachers' development of the knowledge, skills, and dispositions necessary to effectively teach diverse students. When undertaking the development of a course that would prepare preservice and in-service teachers in the United States and South Africa, I wanted to design a course—based on the theory outlined above—that would help teachers consider the role of literacy in their lives and in the

lives of their students, as well as understand literacy demands in various content areas. The course consisted of eight to twelve 3-hour sessions with approximately 30 students enrolled each time the course was taught. The course syllabus stated the following:

> This course will assist preservice and in-service teachers in developing a metacognitive awareness of the processes and strategies they use in their own reading and writing in order to help them think about what their students are experiencing each day. You will develop an awareness of the literacy abilities of one student through close observations and a video analysis of a *literacy event* in your class. You will also develop a *strategies notebook* containing literacy strategies you would like to use in your own teaching next year. In this course you will have opportunities to engage with theory that will help you consider the following questions: What does it mean for a person to be literate in our society and within various content area disciplines? What is critical literacy, and is it something I want for my students? How can multiple literacies be used in strategic ways in my classroom to teach content area materials effectively to all students? What important questions should I be asking about the literacy needs and capabilities of the students in my classes? What is my philosophy about how I can use literacies to support struggling students in my class, and where can I find resources to help them? and How does literacy relate to issues of equity and democracy? You will have an opportunity to find answers to some of these complex questions during our course, but you will also have an opportunity to begin a dialogue that will continue throughout your professional career.

Course requirements included in-class assignments, tutoring assignments in diverse classrooms, active participation in large and small group discussions, reflective journal writing, an action research project, literacy case study, and a strategies notebook. At the end of the course, students wrote their philosophies of how they thought that literacy should be integrated into their teaching.

The U.S. course was composed largely of preservice teachers, many of whom had prior teaching experiences in parochial schools, community-based organizations, and tutoring programs but were enrolled in the teacher education program to gain credentialing and professional development. In South Africa, the course was attended predominantly by practicing teachers who had been educated in underresourced schools. Thus, their educational experience mirrored those of the preservice teachers in the United States more closely than one would expect—not based on experience but based on exposure to theories of teaching. In both locations, the purpose of the course was to familiarize prospective and working teachers with theoretical perspectives and best practices for using reading, writing, and multiple literacies to teach effectively in multilingual and multicultural classrooms. The theoretical and practical topics in this course were strategically chosen to help classroom teachers (a) understand how sociocultural theory might be used to enhance their

51

teaching in diverse classrooms and (b) consider how they might want to use multiple literacies to teach their subject matter effectively. In particular, I used writing as a pedagogical tool during the course to facilitate teachers' development of generative thinking skills, and I hoped that teachers would in turn use writing as a pedagogical tool with their students.

The writing required of these teachers went far beyond simple reflection on personal experiences, by requiring them to consider generative ways to use the knowledge they were gaining to support student learning. I accomplished this through the use of carefully designed writing prompts that called for teachers to respond with an introspective examination of their practices and beliefs about teaching and learning as dynamic, complex, and situated practice that occurred in the lives of students inside and outside the classroom. If teachers responded to the prompts with simple reflections on their personal experiences, they received written probes on their returned papers, asking them to consider relevant perspectives, theoretical readings, and class discussions and to resubmit the assignment after thoughtful revision.

After using extensive writing in these ways, teachers began to consider how they might use writing as a pedagogical tool in their efforts to build learning communities within their classrooms. During my follow-up visitations to their classes, I observed that teachers in my course were beginning to use writing as a pedagogical tool to facilitate the development of generative thinking on the part of the students in their classrooms. The next section provides examples of how this process occurred, explicating the influence of professional development on teachers' and students' generative development.

Data Collection and Analysis

During the first part of the study, the data collected from 50 U.S. teachers and 50 South African teachers included narrative essays of their literacy autobiographies, biographies that they wrote about their students' literacy experiences, transcripts of classroom and small group discussions, journal entries, and reflections written in response to carefully selected class readings assigned in the professional development course. Those readings required teachers to engage with the writings of Vygotsky (1978), Gee (1989), Bakhtin (1981), Delpit (1988), Giroux (1988), McElroy-Johnson (1993), and others and to write reflections about the work of these scholars. Throughout the analysis of the data, I returned to and drew heavily on the teachers' narrative reflections to locate evidence of their changing perspectives and cognitive change (Hollingsworth, 1989) as a result of their participation in the professional development course (Ball, 2006).

The second part of the study started in 1995 when I began visiting the classrooms of the teachers who had completed my professional development course and who were now teaching in CLCCs. I conducted these follow-up visits with about 10% of the U.S. and South African teachers from 1995 to 2005. During these follow-up visits with the focus teachers, I made audio- and videotaped recordings of their teaching and the dialogues that I had with

them concerning their application of the theory, as learned in my course, to their classroom teaching. The follow-up interviews lasted about 2 hours and took place after my 2-hour classroom observations and videotaping. These tape-recorded interviews were transcribed and used to supplement the videotapes of the teachers' classroom teaching, field notes, and photographs taken at the time of our follow-up meetings.

Findings

The data shared in this article to illustrate the findings come from close case studies of two follow-up teachers in the study—one U.S. teacher and one South African teacher—selected because they constitute a representative sample of the many transitioning teachers whom I observed. The transitioning teachers were those who had not initially given issues of diversity much consideration but who eventually displayed evidence that a commitment to working with diverse students was developing (Ball, 2000, 2006).

Two Teacher Participants in the Course

Nomha and Niko were two transitioning teachers who had been somewhat timid and unsure of themselves at the beginning of the course. By the end of the course, however, both thought deeply about issues of teaching diverse students and about developing plans of action for their teaching practices, and in generative ways, they began to apply what they learned in the course to their classroom teaching. They also began to use what they were learning from their students—to tap into the rich cultural and linguistic resources that their students brought into the classroom—to encourage them to become generative thinkers.

Nomha was a South African female teacher who enrolled in the course while I was teaching at a major university located in the Western Cape Province of South Africa (Ball, 2006). Nomha came from a Black African language–speaking background and began her schooling at a lower primary school in one of the Black townships. When we met, Nomha was in her late 20s and had already been teaching in a township school for a few years, with class sizes of 60 to 65 students. At the beginning of the course, she was shy and soft-spoken, but I sensed that she was eager to learn about new perspectives and pedagogical strategies. She had received her teaching credential from an underresourced teachers college that had been established to train Black teachers to teach Black students. She had returned to the further diploma in education program offered at the university to receive additional training.

Niko was an Asian American female in her mid-20s who came from a middle-class community in the Midwestern United States (Ball, 2000). As she began the course, she shared thoughts on her early literacy experiences and voiced her growing awareness of the role that literacy played in her life. Niko grew up attending well-resourced schools. Her interest in the course was motivated by the realization that all students do not receive the type of education

that she had; as such, she was developing a deep interest in working with some of our society's more needy populations.

Both Niko and Nomha began the course by sharing narrative reflections that served to increase their metacognitive awareness of their literacy experiences. In describing her early literacy experiences, Niko noted that she had always been taught in a positive atmosphere by empathetic and understanding teachers who sincerely desired to help make her learning environment an enjoyable and productive place. In contrast, Nomha reflected on the fact that her education began at a township school where teachers were rigid and strict and where repetition and recitation were the norm in teaching pedagogy. In learning to read, Nomha had been required to repeat after the teacher despite noncomprehension—"even if we were saying things that we did not understand." According to Nomha, "most of the time we were taught to memorize without meaning." Failure to successfully comply with the teachers' wishes resulted in the use of corporal punishment. These early literacy experiences of recitations, memorization, adherence to meaningless rules, and punishment laid a negative foundation for Nomha's perceptions about what it meant to be a teacher, whereas Niko's experiences were far more positive and far less authoritarian.

In parallel situations, the teachers were given the assignment to write a literacy biography of a student whom each was working with. As their metacognitive awareness increased, Nomha and Niko began to question some of the literacy experiences in their students' lives. The biographical activities served as readiness exercises that prepared teachers to consider different theoretical perspectives and new visions for generative literacy practices that they could try with the students in their classrooms.

Following the sharing of autobiographical literacy narratives and their students' biographies, the teachers were exposed to carefully selected readings written by sociocultural and critical theorists and to practical teaching strategies based on these theories. The readings were selected to broaden previously held views on literacy and classroom practice. Building on the assumption that teachers' developing ideologies can be affected by carefully selected course readings and well-designed course experiences, I exposed the teachers to readings that included *Teachers as Transformative Intellectuals*. Here, Giroux (1988) proposes that teacher education programs need to be developed where prospective teachers can be educated as transformative intellectuals able to affirm and practice the discourse of freedom and democracy. Other readings included but were not limited to Au's "An Expanded Definition of Literacy" (1993), Delpit's "The Silenced Dialogue" (1988), Gee's "What Is Literacy?" (1989), McElroy-Johnson's "Teaching and Practice: Giving Voice to the Voiceless" (1993), and short excerpts from Freire's *Pedagogy of the Oppressed* (1970), hooks's *Teaching to Transgress* (1994), Vygotsky (1978), and Bakhtin (1981).

Through much discussion of the ideas represented in these texts and the ideas of other authors, teachers began to consider which, if any, of these ideas would become a part of their discourses. Through this process, they began the initial stages of developing their voices on issues related to preparing

teachers to work with students from culturally and linguistically diverse backgrounds. I coupled these readings with assigned observations and authentic teaching experiences and gave assignments that used writing as a pedagogical tool for inquiry to facilitate their ideological becoming. Later, the teachers completed action research projects. These activities served as the catalyst needed to motivate a sense of agency, advocacy, and efficacy on their part as they began making plans about how the course information would influence their work with students.

By the end of the term, I realized that Nomha, Niko, and other teachers in the course were beginning to use generative thinking in planning their classroom teaching. I also noted that they were drawing on the instructional approach used in the professional development course to plan and structure their classroom teaching. Their classroom discourses reflected an awakening to the important role that literacy plays in their lives and in the lives of their students. As this awakening occurred, I detected noticeable changes in their perspectives toward teaching diverse students and in their teaching practices. After demonstrating increased metacognition and a sense of awakening in their reflective writing, their introspective writing reflected a sense of agency, and a sense of advocacy was emerging in their critiques and future plans. Not only was Nomha becoming a generative thinker, but she was also becoming a more confident, more effective teacher as she applied the knowledge that she gained in our professional development course to learn new information about her students. As she asked her students to write about their interests and concerns, she was able to apply that knowledge in her interactions with them, and she integrated that knowledge into her content materials. In doing so, she was able to solve instructional and pedagogical problems in her classroom by making the materials more engaging for the students and more relevant to their interests. Her ultimate goal was for students to generate plans of action to address some of the pressing social issues that existed in their community. Thus, the knowledge that she gained in the professional development course became generative knowledge as she saw the need to integrate this new knowledge with her existing knowledge, and she continually reconsidered that knowledge in light of the needs of her students. When she was introduced to new readings in our course, Nomha applied that knowledge to her classroom teaching. In one of her reflective essays, she wrote,

> Au said that instead of telling the pupils to write a letter required by the syllabus, we should let them write letters to their pen-pals. . . . After reading these articles, I think that rather than giving pupils "topics" chosen by me, I will let them write about their own topics so as to enable them to write more freely. I will use these ideas in my teaching by changing my strategies for learning how my pupils learn, by allowing the pupils to use their mother-tongue as the base so as to make them proficient in reading and learning English, by letting pupils bring their experiences into the classroom so . . . every one should be able to learn from others, and by bringing into my classroom the students home learning environment.

55

Ball

Here, Nomha, a student who came from a strict teacher-centered educational background, talks about what she recalls from her reading of Au (1993), and she determines that it would be a good idea to bring the students' home learning environments into the classroom and to let students choose their topics for writing. Although the strict mandates of school administrators in the apartheid system and her early educational experiences had taught her that multilingual students could not use their home languages in the classroom, she was beginning to realize that multilingualism can be used as a resource in the English classroom. This realization was changing the way that she thought about teaching and her teaching practices. Nomha went on to say that her reading of Vygotsky (1978) had influenced her new choices of pedagogical approaches that she was using in her classroom:

> And also after reading the article by Vygotsky that has changed my perception about literacy. I used to dictate the work [to my students] all the time. I told the students what assignments to go and do and how to do them. But after I read this article, I told the students to give me some topics to write about. I guide them so they can become independent to work without being guided. . . . As a result of these articles you gave us, I began to develop an interest in learning more about Action Research. My interest in teaching was crippled. . . . My self-esteem was taken away. My pride as a teacher was gone. . . . All in all, this course has brought back my confidence as a teacher. . . . This is causing me to consider changes in my teaching career.

According to Nomha, these experiences had also influenced her development of a new sense of confidence in her teaching and a sense of efficacy as a teacher.

Similarly, during our follow-up interviews, Niko talked about using critique and analytical writing to facilitate the process of making some of the things that we covered in the course her own. Niko's action research consisted of her participation in and writing about the class-assigned tutoring activities that she engaged in while volunteering in her own ongoing tutoring and peer counseling activities. As she struggled to integrate the new course theories and best practices into her teaching activities, she wrote analytically and critically about her experiences and developing perspectives. Niko's writing for the course provided evidence of her movement toward internalization of some the concepts that we covered:

> Although we will have been educated as to "how to teach," we can never really learn without experiences, circumstances that provide for different variations of what works. We need to take heed to the possibilities that the problems may reside in ourselves and not in the student. In any case, the responsibility to teach them (not only accept them) is the ideal that we need to instill in ourselves. . . . As I thought about how my readings inform my teaching, the idea that grabbed me most intensely was the idea that we need to "turn ourselves inside

56

out, giving up our own sense of who we are, and being willing to see ourselves in the unflattering light of another's angry gaze" [Delpit, 1995, p. 46]. More than applying this to teaching, this is something that should be applied to any and every situation. To understand our own power and not be afraid to expose our vulnerabilities and raise questions of discrimination is essential to almost every situation.

Here, Niko is questioning the pedagogy used in many teacher education courses that tell teachers how to teach or what to do on Monday morning. However, she notes that few programs prepare teachers to think in generative ways about the "different variations of what works" and what does not work in diverse contexts. As some of the course readings become internally persuasive for Niko, she invokes something that she has taken from Delpit and claims it as her own—the notion that we as teachers need to "turn ourselves inside out, giving up our own sense of who we are, and being willing to see ourselves in the unflattering light of another's angry gaze" as we gain the courage to raise questions about our vulnerabilities and issues of power in the classroom. Niko's statement that we as teachers "need to take heed to the possibilities that the problems may reside in ourselves and not in the student" and that we need to take "responsibility to teach" indicates movement toward advocacy. As Niko contemplated the application of what she has learned to her own teaching, she said,

> Where do I begin to comment in my growth as a result of this class. Even now as I write these words, there are so many unresolved dilemmas, contradictions, questions—and I am trying to live with the worries I've confronted as a student who is soon to be a teacher. . . . I came into this course arrogant and self-assured. Critical thinking had always been my forte; it has been my natural disposition to try and search for deeper meaning and deeper truths. . . . I began with my personal essay about . . . what I wanted to do for the rest of my life. And in this way I began the course, with a love for literature, arrogance from acquired knowledge, and hope for a glorious future. . . . I began to ask lots of questions. . . . And from then on, my arrogance began to deflate. I began to realize my potential role within these students' lives. I was introduced to things I had never even considered. What if my students cannot read? How will they internalize this lack of skill? Who will they become as adults? How can I change this? How can I become the teacher I want to be? . . . I began trying to see through the student's eyes, trying to remember what it was like to be like them. The readings I have done for this class have elucidated cobwebs of half thoughts and have furnished solutions that had begun in my head. . . . In this way my thinking has evolved. . . . I am anxious about having been ignorant and insensitive to certain students. . . . I am afraid to make the wrong moves just as I am excited to make the right ones. But in the end, I take my future position . . . as a privilege to have the opportunity to help mold the wet clay that will one day become fine art. . . . It is their minds that I am exploring and trying to expand.

As Niko writes these words, she begins by recalling the "many unresolved dilemmas, contradictions, [and] questions" that she has been struggling with as she is "trying to live with the worries" that confront her "as a student who is soon to be a teacher." She notes that the course readings have helped her—they "have elucidated [the] cobwebs" in her mind and provided her with solutions to the questions that had begun in her head. As a result, her "thinking has evolved." She contemplates how she can extend similar experiences to the students in her CLCCs. She sees the need to try "to see the world through her students' eyes . . . to remember what it is like to be like them." Niko envisions her life as a teacher as a privilege and wants to provide her students with experiences that will expand their minds. As Niko talked and wrote analytically about theory and her teaching experiences in the presence of her peers and supportive instructors, she began to challenge her preconceived notions about teaching diverse student populations and to stretch herself to consider new possibilities for her future teaching. As she contemplated issues related to teaching for diversity, she noted that she is "anxious about having been ignorant and insensitive to certain students." Although she is afraid that she will make the wrong moves, she is "excited to make the right ones." As she struggled with theoretical notions in the context of her current tutoring projects and course activities, she voiced her changing perspectives in our classroom discussions and in her journal writing. And as I conducted follow-up visits in her classroom, it became evident that the course had generative effects beyond the professional development setting.

Generative Teaching of Diverse Learners

In the final stages of our professional development course, I encouraged teachers to express their own voices on issues of diversity and best practices in CLCCs. Their responses reflected an emerging sense of efficacy. Throughout this process, teachers talked and wrote not only about opportunities, challenges, and the perceived need for changes but also about the actions they planned to implement in their classrooms.

During my follow-up visits to the classrooms of the study's focus teachers, I was able to investigate the implementation of those plans of action in their classrooms. These teachers' journeys to becoming generative educators culminated in their acting on those plans as they became change agents in their schools. I observed generativity in these teachers' interactions with their students, in curricular innovations, and in the reorganization of their classroom structures that included reflective, introspective, analytical, and critical writing with their students. The transformation of the teachers' plans of action from the professional development course required generative thinking on the part of each teacher. For both Nomha and Niko, the ultimate goal of their teaching was for students to generate plans of action that addressed some of the pressing social issues that existed in the students' communities.

58

When I returned to observe and interview these teachers, I did not expect to see a specific set of strategies or lessons being implemented in their classrooms, because my course was not prescriptive in nature. Instead, after gaining an increased sense of metacognitive awareness, agency, advocacy, and voice during our course, I expected and saw increased supporting evidence of generativity. These teachers began to draw on the knowledge that they gained in my course, and they linked it to the knowledge they gained from their students; then they added to their understanding by applying that knowledge to solve instructional and pedagogical problems they encountered in their classrooms. I watched these teachers as they encouraged their students to explore a deeper understanding of what their textbooks were saying, to use critical thinking about how to respond to writing prompts that were assigned, and to pose questions that challenged the authoritative voices of the teacher, the textbooks, and their peers. I also observed the teachers as they presented alternative perspectives on the topics covered in their textbooks and as they invited alternative perspectives from their students. For example, the students in Niko's classroom wrote reflective and introspective narrative essays in response to their reading of literature, whereas in Nomha's classroom, the students were writing reflective and analytical essays and performing the powerful skits they had written on *Ten Years of Democracy in South Africa*. One student wrote the following:

> Ten years of democracy means celebrating and remembering those moments of struggle. It means appreciating what we have and hold on to it. . . . It has been a long journey, starting from 1994, the day that everybody was free and people voted for the party of their choice. It was the beginning of freedom for all and an end of apartheid. People couldn't believe it was actually true that they were voting. It was like a dream.
>
> In this ten years of democracy, I for one have gained something from it. . . . I think there is hope. . . . Women are starting to get noticed and rewarded for what they have done for our country, even in Parliament they have women in high places and their voices are heard. . . . We have women who are doing engineering, which means we are really improving every day. . . . I have decided that I will attend the tecknicon and take classes in engineering. . . . Maybe in another five or ten years there will be some other changes that will make life much easier.

This student is reflecting on the changes that she has seen in society around her in the past 10 years, and she is generating ideas about possibilities for change in her own life and plans for the future. Another student wrote,

> As we are . . . celebrating ten years of freedom, from 1994 forwards, now it is called the new South Africa. . . . Some people are saying that there are few changes because people are still starving and living in shacks. . . . My views are, Yes, there are changes, but there is

59

> something that makes me feel unsatisfied with the government arrangements of this country. The people of South Africa are suffering (AIDS), unemployment, starvation, but the government has spent billion for arms deals for the sake of protecting the country for the next war. . . . I'm trying to say that I think the government should first solve the needs of the people like food, medicine, employment, and houses. . . . For us to become equal, everyone must have jobs, the government must give everyone equal settlements, and we must increase Black Economic Empowerment.

This student is using writing as a tool for introspection on how he feels "unsatisfied with the government arrangements of this country." He is also using writing to critique social and economic conditions in the country, and he is generative in his thinking about how the government should go about solving these problems. Another student wrote generatively on her thoughts about what she thinks should be happening in her community:

> We must build houses, build the roads, provide good education, provide jobs, build health services, build our local towns, and provide police stations. . . . What I encourage is that black and white people in South Africa should learn one another's cultures and languages so that we can bridge the gap of communication and speak whatever language we choose. This can be achieved by the cooperation of each person who is a South African or claiming to be one.

This student is generative in her thinking as she recommends what should be happening between Black and White people and how it can be achieved. And finally, one student wrote,

> I would like to say that I am proud of being South African because many things have happened but we have survived. . . . During the apartheid times, our parents and grandparents couldn't walk the streets without the passport and if the police found you without the pass . . . the police would put you in jail. They were really struggling from what was happening. . . . One person to thank for change is Mr. Mandela, who fought for our freedom. Now . . . many things are changing in the country such as the youth of South Africa and now it is necessary for the youth in our society to act as citizens of the country—to be highly politically educated so that they can earn more money to supply themselves with anything they want to have. And in this new democracy, if you study hard you will be given sponsorship to further your studies and your education will be free. But, we also have choices to make. . . . Peer pressure will always be there, but it is up to a person to overcome. . . . For every situation there is a solution!! We just need to be able to make the right choices for ourselves.

In his writing, this student has generated a plan of action that calls for youth to act as full citizens of the country—to be highly political and to take

60

advantage of educational opportunities rather than give in to peer pressure. Although these students see positive changes in society and signs of hope, they are unsatisfied with current conditions, and they are generating plans for change. These essays illustrate the students' developing sense of voice—recommending that the government first solve the needs of the people by supplying food, medicine, employment, housing, and increased Black economic empowerment. They also illustrate students' developing sense of agency and generative thinking as they talk about plans to attend the tecknicon, recommend improving Black-White communication, and fight against peer pressure.

When I returned to Nomha's classes in 2005, she was busy coaching students who had been selected to represent their school in a formerly all-White regional oratory competition. In 2007, I received the following e-mail messages from one of Nomha's oratory students whom I had met during my 2004 and 2005 visitations. We had kept in contact, and he wrote about what he was doing to act on the generative knowledge that he had gained:

Subject: Grade 12 and the future

Dear Professor

I'm very happy to hear from you. . . .

As I have stated in my last email, grade 12 is becoming almost normal (i.e., when you exclude the pressure and piles of work.) I still LOVE languages . . . thus I have decided to go to a bible training school, their South African branch. There I will be doing translation work—translating publications from English to Afro languages.

So my dream of working with languages will be fulfilled after all (maybe even quicker), and I will get much more satisfaction from it.

Anyways, I will go now because we've just watched the SA budget speech and I need to download the Highlights and check them out.

Enjoy your day.

Peace

This student had developed a love of languages while in school with his teacher Nomha, and he was using generative thinking and problem-solving skills to seek ways to fulfill his lifelong passion of continuing to work with languages after completing high school even though his financial resources were limited. Several months later he wrote,

61

Ball

Subject: How's it Doc!

Dear Doc:

It's been a very long time since we last communicated, and trust me a lot has happened and changed since then. I am now involved in political leadership: I am branch executive committee member of an African National Congress Youth League branch; I'm Western Cape provincial chair person of the Congress of SA Students; and many other things. The list goes on. . . .

What I really wanted to share with you is that on the 8th of this month was the night of my school's matric ball (12th grade award ceremony and farewell) and . . . I was awarded top student in English!! . . . I am also into business now, co-managing an aspiring theatre productions company. . . .

That's it from me for now.

truly yours

This student expressed thanks for having teachers such as Ms. Nomha, who helped him to develop his visions for the future through the development of his oral and written skills. The student's writing tells of the many non-school contexts that he engages in where he has the opportunity to use generative thinking beyond the classroom boundaries. The voices of the students I have shared are typical of the many students whom I engaged with. Student after student told me of their plans to gain further schooling and the details of their entrepreneurial small business schemes, which they planned to implement. In addition, every one of the focus teachers in the study had organized extracurricular forums for their students to engage in, including drama clubs, art clubs, oratory and spoken-word clubs, after-school oral history clubs, and tutoring programs where they collected and shared information with the students on their community lives and discourse practices. Although the specific curriculum in these classrooms may have varied widely, the learning that was taking place within these different contexts on separate continents shared a common thread: the generative teaching and learning that was occurring between the teachers and students. Teachers were drawing on the knowledge they gained in the professional development course, combining it with knowledge they gained from their students, and they were using writing as a pedagogical tool to facilitate generative thinking.

When I visited Niko's school 3 months after the course ended, I observed her classroom of 22 African American and Latino students from low-income backgrounds. Niko presented her students a culturally enriched curriculum that reflected the multiple heritages represented in the school and surrounding community. She used literature, freewrites, exit slips, and assigned research

62

projects designed to help her students learn more about themselves while helping her to learn more about her students' experiences and perspectives. Niko reported that she had reorganized her curriculum around her students and that she was using writing as a pedagogical tool to learn about them. The lesson that I observed during my visitation focused on the students' recent reading of several chapters of Sandra Cisneros's *The House on Mango Street* (1991). As Niko taught the literature lesson, she first had her students review the chapter in small groups; then she engaged the students in a lively class discussion punctuated by questions that helped them to link the story to their experiences and to similar settings in their community.

Students were asked to discuss several chapters that they had read and to consider the theme of community and their hopes and dreams. In small groups they were asked to remember Esperanza's recollections of her life while living on Mango Street and to discuss the various people whom she meets while there. The students recalled that although Esperanza's family had not always lived there, it was perhaps the most important place that she had lived and it represented her heritage and upbringing. They also recalled that Esperanza's central hope throughout the vignettes was to have a large comfortable house—one that she was not ashamed to own, one where she could have control of her destiny. After describing the house on Mango Street, the students discussed Esperanza's greatest dream: having her own house. One student noted,

> Esperanza realized that she was an important part of Mango Street and that it was an important part of her. Although she longed to travel and find a new home of her own, she realized that she would always return to Mango Street to help those who could not achieve their dreams.

After reviewing the vignettes that focused on hopes and dreams, students were supported in analyzing why the author chose to tell the stories as she did. Links were made between the students' lives and the characters' experiences with immigration and poverty. Students were then asked to compose a reflective journal entry to demonstrate an understanding of Esperanza's feelings and to create an artistic rendering of the house as it was depicted in the book. Students compared this story to others about immigration to understand how immigration affects the identity development of many people. Students used personal photos and pictures from magazines to create a collage, and they wrote an essay about the social importance of having hopes and dreams in the book and in their lives. The students discussed how they might make their hopes and dreams become a reality. Finally, they created a PowerPoint presentation and class Web site highlighting their stories and local community resources related to their hopes and dreams.

As her students recapped what they had learned during that day's lesson, I noted that Niko was using writing as a pedagogical tool to facilitate metacognitive awareness, critique, and generative thinking on the part of her students.

She gave her students class assignments that required extended writing as they struggled ideologically with issues related to the literature they were reading and to their personal experiences. The students' writing assignments went beyond simple reflection on personal experiences, requiring them to use writing as a pedagogical tool to analyze problems and to pose solutions that related to their lives outside the classroom.

Both Nomha's and Niko's classroom practices had been influenced by the course, theoretically and pedagogically. When I visited their classrooms, I observed that since the completion of the teacher education course, both teachers had added new writing assignments to their curriculum, which provided opportunities for their students to investigate and share information about their culturally influenced literacy practices. Students were also given opportunities to integrate their culture knowledge when completing academic assignments. In doing so, the teachers were reconceptualizing their curriculum around their students, and they were continuing to use writing as a pedagogical tool to learn about their students. In their efforts to create classrooms that possessed the qualities of a learning community, both teachers articulated a realization that they needed to learn more about their students on an ongoing basis. During my second follow-up visit to Nomha's classroom, she informed me of the thing that she remembered most from the course, namely, to guide her students to become independent—that is, generative—in their thinking. She recalled our conversations about Vygotsky (1978) on scaffolding and McElroy-Johnson (1993) on the development of one's own voice:

> What I did to build on the concept of voice was I let my students write books about their families, their different cultures, the way they do things, and their customs. Even though we are mostly Xhosa speakers in my classes, we practice our customs in different ways . . . independently. We do things according to our clans. So by writing those books we've learned things that we didn't know about each others' backgrounds and about things that are very important to them. . . . And then if something is bothering them, it comes out in their writing and using that I was able to help many of them.

Though Niko and Nomha were presented with diverse students in disparate contexts, their ability to be generative in their teaching resulted in students who were similarly engaged in generative thinking. For both teachers, their goal was to develop critical thinking skills and to teach their students to think generatively about plans of action to address some of the social issues in their community. Another teacher in my course explained the process best when she wrote the following:

> My exposure to reflective writing in your class caused me to want to use similar writing to reach and influence my students at my high school as a part of our service learning program. . . . Our focus area of study is homelessness in the area. . . . The program is designed to make students aware of the areas of need in their communities,

where and how they can be of service, and to question explanations for current conditions. To help facilitate the latter goal, I included an intense writing component in which students address one reflective writing topic each month. . . .The writing component was meant to be very similar to the one used in your course. In that class, I valued very much the way reflection was used both as a tool and a space for exploration, without too much regard to writing errors. As a result, I was free to challenge my own thinking and draw creative conclusions and connections between text and observation. . . . Reflective writing, then, as an experience became a very non-judgmental form of creative thinking, and I wanted to extend that relationship with writing to my students. . . . My experience with reflective writing . . . had one of the most lasting impacts on my development as an educator. It allowed me to manipulate the new concepts, challenge them, and reorganize them next to new ideas and emerging beliefs. . . . My students and I have had some very intriguing seminar discussions addressing such things as whether homelessness is a moral imperative (based on evidence drawn from Opposing Viewpoints articles), and whether community service makes a person more or less humane (based on their own observations).

A Model of Generative Change

Based on my analysis of the changing classroom practices of the transitioning teachers in my follow-up study, a model of generative change emerged. This model illustrates the professional development instructional approach that I used to support the teachers' growth toward generativity, which was subsequently taken up by the teachers and used in their instruction within their classrooms. My analysis showed that as teachers developed metacognitive awareness about the role of literacies and a sense of agency, advocacy, and efficacy, they developed personal voices and generative thinking skills to direct their continued development as teachers within their CLCCs. This process is depicted in Figure 1. My interviews and observations of the teachers' subsequent work with diverse students confirmed that the teachers were influenced by the instructional approach used in the professional development course and that they drew on this model of generative change when working with their students.

This model builds on Vygotsky's construct of mediation (1978) and is based on his emphasis on the powerful use of language as a cultural tool. Wertsch (1985) notes that mediation is best thought of as a process involving the potential of cultural tools to shape action. The model illustrates the notion of mediation as a process involving the strategic use of oral and especially written language as cultural tools to shape and influence teachers' considerations about how to use the knowledge that they gain about pedagogical problem solving to become generative agents of change in their classrooms. The process is generative in that the teachers were motivated to use the same cultural tools to shape their students' development as problem solvers and generative thinkers.
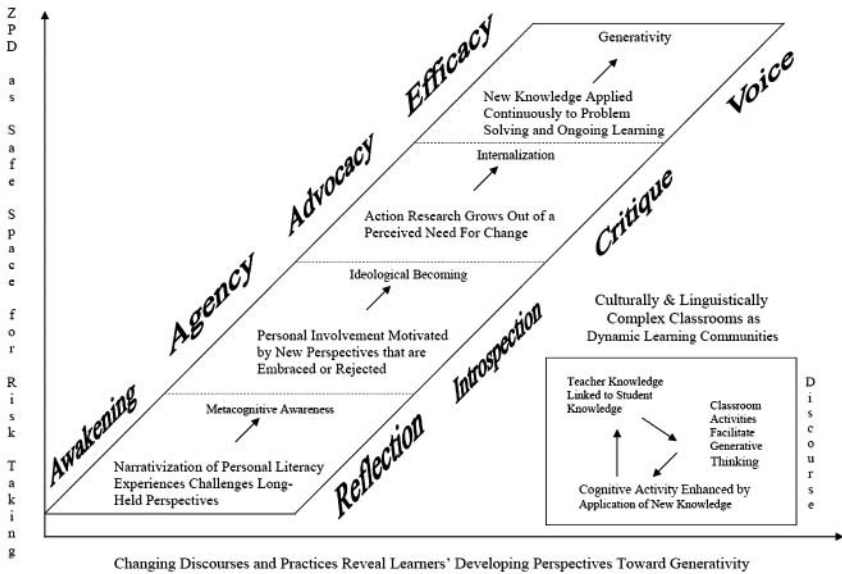
Figure 1. **Model of generative change: The processes through which teachers and students develop voice, generativity, and efficacy in their thinking and practice.**

To make this notion more understandable within the context of teachers' professional development and students' generative development, the model in Figure 1 depicts the strategic use of language—in particular, the use of writing as a pedagogical tool for reflection, introspection, and critique—within professional development and subsequently within CLCCs. The smaller legend inset in Figure 1 depicts the overarching goal of the course: to view professional development classrooms and, subsequently, CLCCs as dynamic learning communities in which oral and written discourses are strategically planned to create environments where cognitive activity is enhanced not only by the introduction of new information but by the application of that new knowledge such that (a) teacher knowledge is linked to student knowledge on an ongoing basis and (b) classroom activities are designed to facilitate generative thinking and problem solving on the part of teachers and students alike.

The model in Figure 1 depicts the processes of cognitive change—metacognitive awareness, ideological becoming, internalization, and generativity—that take place within an individual's zone of proximal development if he or she is allowed to grow within safe spaces where risk taking is encouraged. These processes of cognitive change are facilitated by the strategic use of multiple literacies in the course and particularly by the use of extended writing to engage learners as reflective, introspective, critical, and generative thinkers. As teachers (and, later, their students) move toward generativity,

66

their internal changes are reflected in their changing discourses and practices over time. The model shows four stages in the process of generative change that take place when learning communities are organized such that Phase 1 emphasizes the use of reflection through the narrativization of personal experiences that motivate increased metacognitive awareness concerning the critical role of literacies in teachers' lives and in the lives of others. Engagement with this guided reflection results in an increased sense of personal awakening.

Phase 2 in the process of generative change emphasizes the use of guided introspection that requires teachers (and their students) to look within themselves to determine their role within the teaching/learning community. As teachers engaged in serious discussions and extended writing about important issues related to diversity and literacy, they were motivated by carefully selected readings to take a stand on issues, to locate their level of personal involvement, and to decide if these perspectives would be embraced (to become internally persuasive discourses) or rejected. These activities were designed to facilitate the process of ideological becoming, which resulted in an increased sense of agency.

During Phase 3, the classroom community focused on facilitating internalization through critiques of course readings and through the analysis of action research projects that teachers selected to work on to increase their sense of advocacy. The teachers developed action research projects focusing on the literacy practices of their students, which culminated in plans for implementation. Later, teachers asked their students to conduct ethnographies of community literacy practices and other research projects that linked classroom learning with their communities. Grounded in work that was important to them, the action research projects required teachers and students to formulate questions that were of real interest to them, to carefully describe the data they collected, and to engage in the processes of thoughtful discovery and problem solving as they were thinking and rethinking issues related to teaching, learning, literacy, and diversity. The action research projects served as a catalyst to facilitate the development of generative thinking skills.

The fourth and final phase of this recursive model represents the point at which learners combined theory, best practices, and actual work in communities with diverse populations in ways that facilitated their own theory posing and generative thinking. During this process, they wrote and talked not only about opportunities, challenges, and perceived need for changes but also about the actions they took as they implemented their plans. This process resulted in an increased sense of efficacy and the development of their voices on important issues of diversity.

During the follow-up interviews, teachers referred to the theory they were exposed to in the professional development and their own emerging ideological stance that guided them in their teaching. They spoke with confidence and a sense of efficacy about using writing as a pedagogical tool to learn about their students and then using that knowledge in their teaching. The use of writing as a pedagogical tool provided the teachers a medium for

67

discovering their thoughts and needs; later, it provided a window through which to discover how best to support their students. As the teachers learned about their students through their writing, they integrated that new knowledge with their existing knowledge and used that combined knowledge to solve new and unfamiliar classroom problems. These teachers encouraged their students to explore a deeper understanding of what their textbooks were saying, to use critical thinking about how to respond to writing prompts that were assigned, to link content area topics to their life experiences, to pose queries that challenged their peers and the authoritative voices of the textbooks, and to engage in community building through participation in after-school clubs and community-based organizations. Teachers' modeling this kind of generative thinking with their students inspired the students to become generative thinkers as well.

Conclusions and Implications

The sites of some of the most challenging teaching taking place in the United States and abroad are classrooms that serve students from diverse cultural and linguistic backgrounds. A unique challenge facing teachers in CLCCs is the demand to make the appropriate pedagogical adjustments to meet the needs of their students without having the advantage of being able to draw heavily on their own personal cultural and linguistic experiences as a knowledge base for making those adjustments for many of their students. Because many of the teachers in diverse classrooms come from cultural, linguistic, and socioeconomic backgrounds that are very different from those of their students, it is imperative that they become generative in their pedagogical problem-solving skills. Although we as educational professionals are aware of these challenges, we often find that some of our least prepared teachers are found working in some of our most diverse and underresourced communities—armed with little knowledge about how to meet the teaching and learning needs of their students. It is in these complex classrooms that we need our best-prepared, most highly qualified teachers. Because we know that this is often not the case, a critical key to achieving our goal of preparing additional teachers for diverse classrooms lies in professional development that facilitates the development of teachers as generative practitioners.

This research was designed to increase understanding of how teachers can make use of the opportunities provided within professional development to think about how to apply what they are learning in the teacher education program to becoming effective teachers in their CLCCs. The purpose of this study was not simply to document whether teachers continued to implement particular principles after a program has ended; rather, it was an attempt to investigate teachers' continued learning and their development and use of generative knowledge.

According to Franke et al. (2001), knowledge becomes generative when the learner sees the need to integrate newly gained knowledge with existing knowledge to continue learning and when newly gained knowledge is applied

to solve new and unfamiliar problems. Teachers in CLCCs must become what Giroux (1988) calls *teachers as transformative intellectuals*, who are capable of using acquired knowledge as a basis for reinventing their practices so that their teaching and learning are interdependent, rather than separate, functions. Achieving this vision requires changes in teacher education programs that include the development of teachers who are prepared to teach students from backgrounds different from their own. Achieving this vision also requires changes in teachers' conceptions of themselves as teachers and as learners. Teachers must be prepared to be generative in their thinking and generative in their teaching practices. Professional development programs must be reconceptualized as places where pedagogical approaches that are appropriate for working with diverse populations are modeled to scaffold teachers' development as generative practitioners. Moving forward, we must begin to view the preparation of teachers to teach diverse students as a global challenge, and we must look to the international community for ways to address the challenges we face.

In this article I present the model of generative change that emerged from my research to explain the instructional approach used in the professional development course, as well as the instructional approach later used by the teachers themselves in their growth toward becoming what they considered more effective teachers of diverse students. The model provides a foundation for future work on understanding teacher change and development. The model can also be used as a framework to guide the organization of instruction in professional development programs and as a heuristic to explain what needs to happen in programs aimed toward addressing the challenge of developing a highly skilled teaching force that has the skills, knowledge, and dispositions needed to ensure excellent education for all students. As a heuristic, the model illustrates an approach to teaching that facilitated teachers' metacognitive awareness, ideological becoming, internalization, and generativity and that encouraged teachers to discover solutions for themselves while drawing heavily on the use of writing as a pedagogical tool for deep thinking. Drawing on this model, teacher education programs can design instruction that helps teachers to recognize the need to modify their pedagogical practices and instructional organization in response to the information that they gain in their courses and, later, in response to the information that they gain from the students whom they teach. Teachers can subsequently use this model as a tool that helps them arrive at solutions to the day-to-day challenges they face in their classrooms.

This research can help leaders within the policy arena to acknowledge the importance of facilitating the development of teachers who are generative thinkers. According to Darling-Hammond and Bullmaster (1998), efforts to produce effective schools by teacher-proofing curriculum and by telling teachers what to do and how to do it have failed. These efforts have taught us that "regulations do not transform schools. Only [well trained] teachers can do that, in concert with parents, students, administrators, and the wider community" (p. 1072). Teachers remain the key factor in realizing the full educational

potential of our students. Other initiatives are doomed to fail if the primary agents of instruction are incapable of acting as generative agents of change in our schools and classrooms. Becoming excellent teachers in CLCCs requires much more than the ability to implement a scripted curriculum. As Shulman (1983) pointed out over two decades ago, "no microcomputer will replace them, no television system will clone and distribute them, no scripted lessons will direct and control them, no voucher system will bypass them" (p. 504). Because teachers are the key factor to the successful teaching of all students, we are compelled to look closely at the complex challenge of preparing teachers for diversity and to think seriously about the preparation of teachers who can organize their classrooms to allow for variability in the delivery of instruction—teachers who can diversify their practice so that they can engage every student in learning. This requires generativity on the part of teachers and teacher education programs. Our teachers need support in developing these qualities, and we can provide that support if we reconceptualize current notions of professional development so that we place the preparation of teachers to teach in CLCCs at the center, rather than at the margins, of current reform efforts in teacher education. The model that I present supports us in placing at the center of our work a teachers' movement toward becoming reflective, thoughtful, critical, generative thinkers.

What is needed is the expansion of what we define as basic education for preservice and in-service teachers and an expanded conception of student knowledge as an important resource in the professional development of teachers. We can accomplish this as we open up the curriculum to a variety of perspectives and experiences and expose teachers to complex theoretical ideas that challenge them intellectually and require them to use critical thinking, reasoning, and problem solving to chart new directions for instruction that models how teachers can learn from their students and about their students so they can apply that knowledge to making necessary changes within their classrooms.

Note

This article is designed to provide the necessary empirical foundation to bring attention to the need for the development and support of teachers across national boundaries who are preparing to teach the world's poor, marginalized, and underachieving populations. Ideally, this work will serve to accelerate educational parity across racial and social boundaries, and the legacy of academic failure that plagues so many students will be overcome through an expanded understanding of the processes of generative change.

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