Editor's Note: *This article draws from Geneva Gay's recent book,* Culturally Responsive Teaching: Theory, Research, and Practice, *which received the 2001 Outstanding Writing Award from the American Association of Colleges for Teacher Education.*

PREPARING FOR CULTURALLY RESPONSIVE TEACHING

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In this article, a case is made for improving the school success of ethnically diverse students through culturally responsive teaching and for preparing teachers in preservice education programs with the knowledge, attitudes, and skills needed to do this. The ideas presented here are brief sketches of more thorough explanations included in my recent book, *Culturally Responsive Teaching: Theory, Research, and Practice* (2000). The specific components of this approach to teaching are based on research findings, theoretical claims, practical experiences, and personal stories of educators researching and working with underachieving African, Asian, Latino, and Native American students. These data were produced by individuals from a wide variety of disciplinary backgrounds including anthropology, sociology, psychology, sociolinguistics, communications, multicultural education, K-college classroom teaching, and teacher education. Five essential elements of culturally responsive teaching are examined: developing a knowledge base about cultural diversity, including ethnic and cultural diversity content in the curriculum, demonstrating caring and building learning communities, communicating with ethnically diverse students, and responding to ethnic diversity in the delivery of instruction. *Culturally responsive teaching* is defined as using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively. It is based on the assumption that when academic knowledge and skills are situated within the lived experiences and frames of reference of students, they are more personally meaningful, have higher interest appeal, and are learned more easily and thoroughly (Gay, 2000). As a result, the academic achievement of ethnically diverse students will improve when they are taught through their own cultural and experiential filters (Au & Kawakami, 1994; Foster, 1995; Gay, 2000; Hollins, 1996; Kleinfeld, 1975; Ladson-Billings, 1994, 1995).

DEVELOPING A CULTURAL DIVERSITY KNOWLEDGE BASE

Educators generally agree that effective teaching requires mastery of content knowledge and pedagogical skills. As Howard (1999) so aptly stated, "We can't teach what we don't know." This statement applies to knowledge both of student populations and subject matter. Yet, too many teachers are inadequately prepared to teach ethnically diverse students. Some professional programs still equivocate about including multicultural education despite the growing numbers of and disproportionately poor performance of students of color. Other programs are trying to decide what is the most appropriate place and "face" for it. A few are embracing multicultural education enthusiastically. The equivocation is

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inconsistent with preparing for culturally responsive teaching, which argues that *explicit knowledge* about cultural diversity is imperative to meeting the educational needs of ethnically diverse students.

Part of this knowledge includes understanding the cultural characteristics and contributions of different ethnic groups (Hollins, King, & Hayman, 1994; King, Hollins, & Hayman, 1997; Pai, 1990; Smith, 1998). Culture encompasses many things, some of which are more important for teachers to know than others because they have direct implications for teaching and learning. Among these are ethnic groups' cultural values, traditions, communication, learning styles, contributions, and relational patterns. For example, teachers need to know (a) which ethnic groups give priority to communal living and cooperative problem solving and how these preferences affect educational motivation, aspiration, and task performance; (b) how different ethnic groups' protocols of appropriate ways for children to interact with adults are exhibited in instructional settings; and (c) the implications of gender role socialization in different ethnic groups for implementing equity initiatives in classroom instruction. This information constitutes the first essential component of the knowledge base of culturally responsive teaching. Some of the cultural characteristics and contributions of ethnic groups that teachers need to know are explained in greater detail by Gold, Grant, and Rivlin (1977); Shade (1989); Takaki (1993); Banks and Banks (1995); and Spring (1995).

The knowledge that teachers need to have about cultural diversity goes beyond mere awareness of, respect for, and general recognition of the fact that ethnic groups have different values or express similar values in various ways. Thus, the second requirement for developing a knowledge base for culturally responsive teaching is acquiring detailed factual information about the cultural particularities of specific ethnic groups (e.g., African, Asian, Latino, and Native American). This is needed to make schooling more interesting and stimulating for, representative of, and responsive to ethnically diverse students. Too many teachers and teacher educators think that their subjects (particularly math and science) and cultural diversity are incompatible, or that combining them is too much of a conceptual and substantive stretch for their subjects to maintain disciplinary integrity. This is simply not true. There is a place for cultural diversity in every subject taught in schools. Furthermore, culturally responsive teaching deals as much with using multicultural instructional strategies as with adding multicultural content to the curriculum. Misconceptions like these stem, in part, from the fact that many teachers do not know enough about the contributions that different ethnic groups have made to their subject areas and are unfamiliar with multicultural education. They may be familiar with the achievements of select, high-profile individuals from some ethnic groups in some areas, such as African American musicians in popular culture or politicians in city, state, and national government. Teachers may know little or nothing about the contributions of Native Americans and Asian Americans in the same arenas. Nor do they know enough about the less publicly visible but very significant contributions of ethnic groups in science, technology, medicine, math, theology, ecology, peace, law, and economics.

Many teachers also are hard-pressed to have an informed conversation about leading multicultural education scholars and their major premises, principles, and proposals. What they think they know about the field is often based on superficial or distorted information conveyed through popular culture, mass media, and critics. Or their knowledge reflects cursory academic introductions that provide insufficient depth of analysis of multicultural education. These inadequacies can be corrected by teachers' acquiring more knowledge about the contributions of different ethnic groups to a wide variety of disciplines and a deeper understanding of multicultural education theory, research, and scholarship. This is a third important pillar of the knowledge foundation of culturally responsive teaching. Acquiring this knowledge is not as difficult as it might at first appear. Ethnic individuals and groups have been making worthy contributions to the full range of life and culture in the United States and humankind from the very beginning. And there is no shortage of

quality information available about multicultural education. It just has to be located, learned, and woven into the preparation programs of teachers and classroom instruction. This can be accomplished, in part, by all prospective teachers taking courses on the contributions of ethnic groups to the content areas that they will teach and on multicultural education.

DESIGNING CULTURALLY RELEVANT CURRICULA

In addition to acquiring a knowledge base about ethnic and cultural diversity, teachers need to learn how to convert it into culturally responsive curriculum designs and instructional strategies. Three kinds of curricula are routinely present in the classroom, each of which offers different opportunities for teaching cultural diversity. The first is *formal* plans for instruction approved by the policy and governing bodies of educational systems. They are usually anchored in and complemented by adopted textbooks and other curriculum guidelines such as the "standards" issued by national commissions, state departments of education, professional associations, and local school districts. Even though these curriculum documents have improved over time in their treatment of ethnic and cultural diversity, they are still not as good as they need to be (Wade, 1993). Culturally responsive teachers know how to determine the multicultural strengths and weaknesses of curriculum designs and instructional materials and make the changes necessary to improve their overall quality. These analyses should focus on the quantity, accuracy, complexity, placement, purpose, variety, significance, and authenticity of the narrative texts, visual illustrations, learning activities, role models, and authorial sources used in the instructional materials. There are several recurrent trends in how formal school curricula deal with ethnic diversity that culturally responsive teachers need to correct. Among them are avoiding controversial issues such as racism, historical atrocities, powerlessness, and hegemony; focusing on the accomplishments of the same few high-profile individuals repeatedly and ignoring the actions of groups; giving proportionally more attention to African Americans than other groups of color; decontextualizing women, their issues, and their actions from their race and ethnicity; ignoring poverty; and emphasizing factual information while minimizing other kinds of knowledge (such as values, attitudes, feelings, experiences, and ethics). Culturally responsive teaching reverses these trends by dealing directly with controversy; studying a wide range of ethnic individuals and groups; contextualizing issues within race, class, ethnicity, and gender; and including multiple kinds of knowledge and perspectives. It also recognizes that these broad-based analyses are necessary to do instructional justice to the complexity, vitality, and potentiality of ethnic and cultural diversity. One specific way to begin this curriculum transformation process is to teach preservice (and inservice) teachers how to do deep cultural analyses of textbooks and other instructional materials, revise them for better representations of culturally diversity, and provide many opportunities to practice these skills under guided supervision. Teachers need to thoroughly understand existing obstacles to culturally responsive teaching before they can successfully remove them.

Other instructional plans used frequently in schools are called the *symbolic curriculum* (Gay, 1995). They include images, symbols, icons, mottoes, awards, celebrations, and other artifacts that are used to teach students knowledge, skills, morals, and values. The most common forms of symbolic curricula are bulletin board decorations; images of heroes and heroines; trade books; and publicly displayed statements of social etiquette, rules and regulations, ethical principles, and tokens of achievement. Therefore, classroom and school walls are valuable "advertising" space, and students learn important lessons from what is displayed there. Over time, they come to expect certain images, value what is present, and devalue that which is absent. Culturally responsive teachers are critically conscious of the power of the symbolic curriculum as an instrument of teaching and use it to help convey important information, values, and actions about ethnic and cultural diversity. They ensure that the images displayed in classrooms represent a wide variety of age, gender, time, place, social class, and positional diversity within and

across ethnic groups and that they are accurate extensions of what is taught through the formal curriculum. For example, lessons of leadership, power, and authority taught through images should include males and females and expressive indicators of these accomplishments from many different ethnic groups.

A third type of curriculum that is fundamental to culturally responsive teaching is what Cortés (1991, 1995, 2000) has called the *societal curriculum*. This is the knowledge, ideas, and impressions about ethnic groups that are portrayed in the mass media. Television programs, newspapers, magazines, and movies are much more than mere factual information or idle entertainment. They engage in ideological management (Spring, 1992) and construct knowledge (Cortés, 1995) because their content reflects and conveys particular cultural, social, ethnic, and political values, knowledge, and advocacies. For many students, mass media is the only source of knowledge about ethnic diversity; for others, what is seen on television is more influential and memorable than what is learned from books in classrooms. Unfortunately, much of this "knowledge" is inaccurate and frequently prejudicial. In a study of ethnic stereotyping in news reporting, Campbell (1995) found that these programs perpetuate "myths about life outside of white 'mainstream' America . . . [that] contribute to an understanding of minority cultures as less significant, as marginal" (p. 132). Members of both minority and majority groups are negatively affected by these images and representations. Ethnic distortions in mass media are not limited to news programs; they are pervasive in other types of programming as well. The messages they transmit are too influential for teachers to ignore. Therefore, culturally responsive teaching includes thorough and critical analyses of how ethnic groups and experiences are presented in mass media and popular culture. Teachers need to understand how media images of African, Asian, Latino, Native, and European Americans are manipulated; the effects they have on different ethnic groups; what formal school curricula and instruction can do to counteract their influences; and how to teach students to be discerning consumers of and resisters to ethnic information disseminated through the societal curriculum.

DEMONSTRATING CULTURAL CARING AND BUILDING A LEARNING COMMUNITY

A third critical component of preparation for culturally responsive teaching is creating classroom climates that are conducive to learning for ethnically diverse students. Pedagogical actions are as important as (if not more important than) multicultural curriculum designs in implementing culturally responsive teaching. They are not simply technical processes of applying any "best practices" to underachieving students of color, however. Much more is required. Teachers need to know how to use *cultural scaffolding* in teaching these students—that is, using their own cultures and experiences to expand their intellectual horizons and academic achievement. This begins by demonstrating culturally sensitive caring and building culturally responsive learning communities. Teachers have to care so much about ethnically diverse students and their achievement that they accept nothing less than high-level success from them and work diligently to accomplish it (Foster, 1997; Kleinfeld, 1974, 1975). This is a very different conception of caring than the often-cited notion of "gentle nurturing and altruistic concern," which can lead to benign neglect under the guise of letting students of color make their own way and move at their own pace.

Culturally responsive caring also places "teachers in an ethical, emotional, and academic partnership with ethnically diverse students, a partnership that is anchored in respect, honor, integrity, resource sharing, and a deep belief in the possibility of transcendence" (Gay, 2000, p. 52). Caring is a moral imperative, a social responsibility, and a pedagogical necessity. It requires that teachers use "knowledge and strategic thinking to decide how to act in the best interests of others . . . [and] binds individuals to their society, to their communities, and to each other" (Webb, Wilson, Corbett, & Mordecai, 1993, pp. 33-34). In culturally responsive teaching, the "knowledge" of interest is information about ethnically diverse groups; the "strategic thinking" is how this cultural knowledge is used to redesign teach-

ing and learning; and the "bounds" are the reciprocity involved in students working with each other and with teachers *as partners* to improve their achievement. Thus, teachers need to understand that culturally responsive caring is *action oriented* in that it demonstrates high expectations and uses imaginative strategies to ensure academic success for ethnically diverse students. Teachers genuinely believe in the intellectual potential of these students and accept, unequivocally, their responsibility to facilitate its realization without ignoring, demeaning, or neglecting their ethnic and cultural identities. They build toward academic success from a basis of cultural validation and strength.

Building community among diverse learners is another essential element of culturally responsive teaching. Many students of color grow up in cultural environments where the welfare of the group takes precedence over the individual and where individuals are taught to pool their resources to solve problems. It is not that individuals and their needs are neglected; they are addressed within the context of group functioning. When the group succeeds or falters, so do its individual members. As a result, the group functions somewhat like a "mutual aid society" in which all members are responsible for helping each other perform and ensuring that everyone contributes to the collective task. The positive benefits of communities of learners and cooperative efforts on student achievement have been validated by Escalanté and Dirmann (1990) in high school mathematics for Latinos; by Sheets (1995) in high school Spanish language and literature with low-achieving Latinos; by Fullilove and Treisman (1990) in 1st-year college calculus with African, Latino, and Chinese Americans; and by Tharp and Gallimore (1988) in elementary reading and language arts with Native Hawaiian children. These ethics and styles of working are quite different from the typical ones used in schools, which give priority to the individual and working independently. Culturally responsive teachers understand how conflicts between different work styles may interfere with academic efforts and outcomes, and they understand how to design more communal learning environments.

The process of building culturally responsive communities of learning is important for teachers to know as well. The emphasis should be on *holistic* or *integrated* learning. Contrary to the tendency in conventional teaching to make different types of learning (cognitive, physical, emotional) discrete, culturally responsive teaching deals with them in concert. Personal, moral, social, political, cultural, and academic knowledge and skills are taught simultaneously. For example, students are taught their cultural heritages and positive ethnic identity development along with math, science, reading, critical thinking, and social activism. They also are taught about the heritages, cultures, and contributions of other ethnic groups as they are learning their own. Culturally responsive teachers help students to understand that knowledge has moral and political elements and consequences, which obligate them to take social action to promote freedom, equality, and justice for everyone. The positive effects of teaching these knowledges and skills simultaneously for African, Asian, Latino, and Native American students are documented by Ladson-Billings (1994); Foster (1995); Krater, Zeni, & Cason, (1994); Tharp & Gallimore (1988); Escalanté and Dirmann (1990); and Sheets (1995).

CROSS-CULTURAL COMMUNICATIONS

Effective cross-cultural communication is a fourth pivotal element of preparing for culturally responsive teaching. Porter and Samovar (1991) explained that culture influences "what we talk about; how we talk about it; what we see, attend to, or ignore; how we think; and what we think about" (p. 21). Montagu and Watson (1979) added that communication is the "ground of meeting and the foundation of community" (p. vii) among human beings. Without this "meeting" and "community" in the classroom, learning is difficult to accomplish for some students. In fact, determining what ethnically diverse students know and can do, as well as what they are capable of knowing and doing, is often a function of how well teachers can communicate with them. The intellectual thought of students from different ethnic groups is *culturally encoded* (Cazden, John, & Hymes, 1985) in that its expres-

sive forms and substance are strongly influenced by cultural socialization. Teachers need to be able to decipher these codes to teach ethnically diverse students more effectively.

As is the case with any cultural component, characteristics of ethnic communication styles are core traits of group trends, not descriptions of the behaviors of individual members of the group. Whether and how particular individuals manifest these characteristics vary along continua of depth, clarity, frequency, purity, purpose, and place. However, expressive variability of cultural characteristics among ethnic group members does not nullify their existence. It is imperative for teachers to understand these realities because many of them are hesitant about dealing with cultural descriptors for fear of stereotyping and overgeneralizing. They compensate for this danger by trying to ignore or deny the existence of cultural influences on students' behaviors and their own. The answer is not denial or evasion but direct confrontation and thorough, critical knowledge of the interactive relationships between culture, ethnicity, communication, and learning and between individuals and groups.

Culturally responsive teacher preparation programs teach how the communication styles of different ethnic groups reflect cultural values and shape learning behaviors and how to modify classroom interactions to better accommodate them. They include knowledge about the linguistic structures of various ethnic communication styles as well as contextual factors, cultural nuances, discourse features, logic and rhythm, delivery, vocabulary usage, role relationships of speakers and listeners, intonation, gestures, and body movements. Research reported by Cazden et al. (1985), Kochman (1981), and Smitherman (1994) indicated that the discourse features of cultural communications are more challenging and problematic in teaching ethnically different students than structural linguistic elements. The cultural markers and nuances embedded in the communicative behaviors of highly ethnically affiliated Latino, Native, Asian, and African Americans are difficult to recognize, understand, accept, and respond to without corresponding cultural knowledge of these ethnic groups.

There are several other more specific components of the communication styles of ethnic groups that should be part of the preparation for and practice of culturally responsive teaching. One of these is the *protocols of participation in discourse*. Whereas in mainstream schooling and culture a passive-receptive style of communication and participation predominates, many groups of color use an active-participatory one. In the first, communication is didactic, with the speaker playing the active role and the listener being passive. Students are expected to listen quietly while teachers talk and to talk only at prescribed times when granted permission by the teacher. Their participation is usually solicited by teachers' asking convergent questions that are posed to specific individuals and require factual, "right answer" responses. This pattern is serialized in that it is repeated from one student to the next (Goodlad, 1984; Philips, 1983).

In contrast, the communicative styles of most ethnic groups of color in the United States are more active, participatory, dialectic, and multimodal. Speakers expect listeners to engage with them as they speak by providing prompts, feedback, and commentary. The roles of speaker and listener are fluid and interchangeable. Among African Americans, this interactive communicative style is referred to as "call-response" (Baber, 1987; Smitherman, 1977); and for Native Hawaiians, it is called "talk-story" (Au, 1993; Au & Kawakami, 1994). Among European American females, the somewhat similar practice of "talking along with the speaker" to show involvement, support, and confirmation is described as "rapport talk" (Tannen, 1990). These *communal communication styles* can be problematic in the classroom for both teachers and students. Uninformed and unappreciative teachers consider them rude, distractive, and inappropriate and take actions to squelch them. Students who are told not to use them may be, in effect, intellectually silenced. Because they are denied use of their natural ways of talking, their thinking, intellectual engagement, and academic efforts are diminished as well.

Another communication technique important to doing culturally responsive teaching is understanding different ethnic groups' *patterns of task engagement* and *organizing ideas*. In school, students are taught to be very direct, precise, deductive, and linear in communication. That is, they should be parsimonious in talking and writing, avoid using lots of embellishment, stay focused on the task or stick to the point, and build a logical case from the evidence to the conclusion, from the parts to the whole. When issues are debated and information is presented, students are expected to be objective, dispassionate, and explicit in reporting carefully sequential facts. The quality of the discourse is determined by the clarity of the descriptive information provided; the absence of unnecessary verbiage, flair, or drama; and how easily the listener (or reader) can discern the logic and relationship of the ideas (Kochman, 1981). Researchers and scholars call this communicative style *topic-centered* (Au, 1993; Michaels 1981, 1984). Many African, Asian, Latino, and Native Americans use a different approach to organizing and transmitting ideas: one called *topic-chaining* communication. It is highly contextual, and much time is devoted to setting a social stage prior to the performance of an academic task. This is accomplished by the speakers' (or writers') providing a lot of background information; being passionately and personally involved with the content of the discourse; using much indirectness (such as innuendo, symbolism, and metaphor) to convey ideas; weaving many different threads or issues into a single story; and embedding talk with feelings of intensity, advocacy, evaluation, and aesthetics. There also is the tendency to make the discourse conversational (Au, 1993; Fox, 1994; Kochman, 1981; Smitherman, 1994). The thinking of these speakers appears to be circular, and their communication sounds like storytelling. To one who is unfamiliar with it, this communication style "sounds rambling, disjointed, and as if the speaker never ends a thought before going on to something else" (Gay, 2000, p. 96). These (and other) differences in ethnic communication styles have many implications for culturally responsive teaching. Understanding them is necessary to avoid violating the cultural values of ethnically diverse students in instructional communications; to better decipher their intellectual abilities, needs, and competencies; and to teach them style or code-shifting skills so that they can communicate in different ways with different people in different settings for different purposes. Therefore, *multicultural communication competency* is an important goal and component of culturally responsive teaching.

CULTURAL CONGRUITY IN CLASSROOM INSTRUCTION

The final aspect of preparation for culturally responsive teaching discussed in this article deals with the actual delivery of instruction to ethnically diverse students. Culture is deeply embedded in any teaching; therefore, teaching ethnically diverse students has to be *multiculturalized*. A useful way to think about operationalizing this idea in the act of teaching is matching instructional techniques to the learning styles of diverse students. Or, as the contributing authors to *Education and Cultural Process* (Spindler, 1987) suggested, establishing continuity between the modus operandi of ethnic groups and school cultures in teaching and learning. Many possibilities for establishing these matches, intersections, or bridges are implied in the previous discussions. For example, a topic-chaining communication style is very conducive to a storytelling teaching style. Cooperative group learning arrangements and peer coaching fit well with the communal cultural systems of African, Asian, Native, and Latino American groups (Gay, 2000; Spring, 1995). Autobiographical case studies and fiction can crystallize ethnic identity and affiliation issues across contextual boundaries (i.e., geographic, generational, temporal). Motion and movement, music, frequent variability in tasks and formats, novelty, and dramatic elements in teaching improve the academic performance of African Americans (Allen & Boykin, 1992; Allen & Butler, 1996; Boykin, 1982; Guttentag & Ross, 1972; Hanley, 1998).

Cultural characteristics provide the criteria for determining how instructional strategies should be modified for ethnically diverse students. Developing skills in this area should begin with teacher education students confronting the

misconceptions and controversies surrounding learning styles. Some might be resolved by understanding that learning styles are how individuals engage in the process of learning, not their intellectual abilities. Like all cultural phenomena, they are complex, multidimensional, and dynamic. There is room for individuals to move around within the characteristics of particular learning styles, and they can be taught to cross style parameters. Learning styles do have core structures, and specific patterns by ethnic groups are discernible (see, for instance, Shade, 1989). The internal structure of ethnic learning styles includes at least eight key components (which are configured differently for various groups): preferred content; ways of working through learning tasks; techniques for organizing and conveying ideas and thoughts; physical and social settings for task performance; structural arrangements of work, study, and performance space; perceptual stimulation for receiving, processing, and demonstrating comprehension and competence; motivations, incentives, and rewards for learning; and interpersonal interactional styles. These dimensions provide different points of entry and emphasis for matching instruction to the learning styles of students from various ethnic groups. To respond most effectively to them, teachers need to know how they are configured for different ethnic groups as well as the patterns of variance that exist within the configurations.

Another powerful way to establish cultural congruity in teaching is integrating ethnic and cultural diversity into the most fundamental and high-status aspects of the instructional process on a habitual basis. An examination of school curricula and measures of student achievement indicates that the highest stakes and highest status school subjects or skill areas are math, science, reading, and writing. Teachers should learn how to multiculturalize these especially, although all formal and informal aspects of the educational process also should be changed. Further analysis of teaching behaviors reveals that a high percentage of instructional time is devoted to giving examples, scenarios, and vignettes to demonstrate how information, principles, concepts, and skills operate in practice. These make up the *pedagogical bridges* that connect prior knowledge with new knowledge, the known with the unknown, and abstractions with lived realities. Teachers need to develop rich repertoires of multicultural instructional examples to use in teaching ethnically diverse students.

This is not something that happens automatically or simply because we want it to. It is a learned skill that should be taught in teacher preparation programs. The process begins with understanding the role and prominence of examples in the instructional process, knowing the cultures and experiences of different ethnic groups, harvesting teaching examples from these critical sources, and learning how to apply multicultural examples in teaching other knowledge and skills—for instance, using illustrations of ethnic architecture, fabric designs, and recipes in teaching geometric principles, mathematical operations, and propositional thought. Or using various samples of ethnic literature in teaching the concept of genre and reading skills such as comprehension, inferential thinking, vocabulary building, and translation. Research indicates that culturally relevant examples have positive effects on the academic achievement of ethnically diverse students. Boggs, Watson-Gegeo, and McMillen (1985) and Tharp and Gallimore (1988) demonstrated these effects for Native Hawaiians; Foster (1989), Lee (1993), and Moses and Cobb (2001) for African Americans; García (1999) for Latinos and limited-English speakers; and Lipka and Mohatt (1998) for Native Alaskans. Observations made by Lipka and Mohatt on their research and practice with using cultural examples to teach math and science to Yup'ik students in Alaska underscored the importance and benefits of these strategies for improving school achievement. They noted that

> Important connections between an aboriginal system of numbers and measurements and the hunting and gathering context from which it derived can be used as a bridge to the decontextualized abstract system often used in teaching mathematics and science, . . . can demystify how mathematics and science are derived . . . [and] visualize . . . ways in which everyday tasks and knowledge can be a basis for learning in formal schooling. (p. 176).

A wide variety of other techniques for incorporating culturally diverse contributions, expe-

riences, and perspectives into classroom teaching can be extracted from the work of these and other scholars. They are valuable models and incentives for doing culturally responsive teaching and should be a routine part of teacher preparation programs.

CONCLUSION

The components of the preparation for and practice of culturally responsive teaching included in this discussion are not inclusive. There is much more to know, think, and do. These suggestions are merely samples of the knowledge and skills needed to prepare teachers to work more effectively with students who are not part of the U.S. ethnic, racial, and cultural mainstream. This preparation requires a more thorough knowledge of the specific cultures of different ethnic groups, how they affect learning behaviors, and how classroom interactions and instruction can be changed to embrace these differences. Because culture strongly influences the attitudes, values, and behaviors that students and teachers bring to the instructional process, it has to likewise be a major determinant of how the problems of underachievement are solved. This mandate for change is both simple and profound. It is simple because it demands for ethnically different students that which is already being done for many middle-class, European American students—that is, the right to grapple with learning challenges from the point of strength and relevance found in their own cultural frames of reference. It is profound because, to date, U.S. education has not been very culturally responsive to ethnically diverse students. Instead, these students have been expected to divorce themselves from their cultures and learn according to European American cultural norms. This places them in double jeopardy—having to master the academic tasks while functioning under cultural conditions unnatural (and often unfamiliar) to them. Removing this second burden is a significant contribution to improving their academic achievement. This can be done by all teachers' being culturally responsive to ethnically diverse students throughout their instructional processes. But they cannot be reasonably held accountable for doing so if they are not adequately prepared. Therefore, teacher preparation programs must be as culturally responsive to ethnic diversity as K-12 classroom instruction.

REFERENCES

Allen, B. A., & Boykin, A. W. (1992). African-American children and the educative process: Alleviating cultural discontinuity through prescriptive pedagogy. *School Psychology Review*, *21*(4), 586-598.

Allen, B. A., & Butler, L. (1996). The effects of music and movement opportunity on the analogical reasoning performance of African American and White children: A preliminary study. *Journal of Black Psychology*, *22*(3), 316-328.

Au, K. H. (1993). *Literacy instruction in multicultural settings*. New York: Harcourt-Brace.

Au, K. H., & Kawakami, A. J. (1994). Cultural congruence in instruction. In E. R. Hollins, J. E. King, & W. C. Hayman (Eds.), *Teaching diverse populations: Formulating a knowledge base* (pp. 5-23). Albany: State University of New York Press.

Baber, C. R. (1987). The artistry and artifice of Black communications. In G. Gay & W. L. Baber (Eds.), *Expressively Black: The cultural basis of ethnic identity* (pp. 75-108). New York: Praeger.

Banks, J. B., & Banks, C.A.M. (Eds.). (1995). *Handbook of research on multicultural education*. New York: Macmillan.

Boggs, S. T., Watson-Gegeo, K., & McMillen, G. (1985). *Speaking, relating, and learning: A study of Hawaiian children at home and at school*. Norwood, NJ: Ablex.

Boykin, A. W. (1982). Task variability and the performance of Black and White schoolchildren: Vervistic explorations. *Journal of Black Studies*, *12*(4), 469-485.

Campbell, C. P. (1995). *Race, myth, and the news*. Thousand Oaks, CA: Sage.

Cazden, C. B., John, V. P., & Hymes, D. (Eds.). (1985). *Functions of language in the classroom*. Prospect Heights, IL: Waveland.

Cortés, C. E. (1991). Empowerment through media literacy: A multicultural approach. In C. E. Sleeter (Ed.), *Empowerment through multicultural education* (pp. 143-157). Albany: State University of New York Press.

Cortés, C. E. (1995). Knowledge construction and popular culture: The media as multicultural educator. In J. A. Banks & C.A.M. Banks (Eds.), *Handbook of research on multicultural education* (pp. 169-183). New York: Macmillan.

Cortés, C. E. (2000). *Our children are watching: How media teach about diversity*. New York: Teachers College Press.

Escalanté, J., & Dirmann, J. (1990). The Jaime Escalanté math program. *Journal of Negro Education*, *59*(3), 407-423.

Foster, M. (1989). It's cooking now: A performance analysis of the speech events of a Black teacher in an urban community college. *Language in Society*, *18*(1), 1-29.

Foster, M. (1995). African American teachers and culturally relevant pedagogy. In J. A. Banks & C.A.M. Banks (Eds.), *Handbook of research on multicultural education* (pp. 570-581). New York: Macmillan.

Foster, M. (1997). *Black teachers on teaching*. New York: New Press.

Fox, H. (1994). *Listening to the world: Cultural issues in academic writing*. Urbana, IL: National Council of Teachers of English.

Fullilove, R. E., & Treisman, P. U. (1990). Mathematics achievement among African American undergraduates at the University of California, Berkeley: An evaluation of the Mathematics Workshop Program. *Journal of Negro Education*, *59*(30), 463-478.

García, E. (1999). *Student cultural diversity: Understanding and meeting the challenge*. Boston: Houghton Mifflin.

Gay, G. (1995). A multicultural school curriculum. In C. A. Grant & M. Gomez (Eds.), *Making school multicultural: Campus and classroom* (pp. 37-54). Englewood Cliffs, NJ: Merrill/Prentice Hall.

Gay, G. (2000). *Culturally responsive teaching: Theory, research, and practice*. New York: Teachers College Press.

Gold, M. J., Grant, C. A., & Rivlin, H. N. (Eds.). (1977). *In praise of diversity: A resource book on multicultural education*. Washington, DC: Teacher Corps.

Goodlad, J. I. (1984). *A place called school: Prospects for the future*. New York: McGraw-Hill.

Guttentag, M., & Ross, S. (1972). Movement responses in simple concept learning. *American Journal of Orthopsychiatry*, *42*(4), 657-665.

Hanley, M. S. (1998). *Learning to fly: Knowledge construction of African American adolescents through drama*. Unpublished doctoral dissertation, University of Washington, Seattle.

Hollins, E. R. (1996). *Culture in school learning: Revealing the deep meaning*. Mahwah, NJ: Lawrence Erlbaum.

Hollins, E. R., King, J. E., & Hayman, W. C. (Eds.). (1994). *Teaching diverse populations: Formulating a knowledge base*. Albany: State University of New York Press.

Howard, G. R. (1999). *We can't teach what we don't know: White teachers, multiracial schools*. New York: Teachers College Press.

King, J. E., Hollins, E. R., & Hayman, W. C. (Eds.). (1997). *Preparing teachers for cultural diversity*. New York: Teachers College Press.

Kleinfeld, J. (1974). Effects of nonverbal warmth on the learning of Eskimo and White students. *Journal of Social Psychology*, *92*(1), 3-9.

Kleinfeld, J. (1975). Effective teachers of Eskimo and Indian students. *School Review*, *83*(2), 301-344.

Kochman, T. (1981). *Black and White styles in conflict*. Chicago: University of Chicago Press.

Krater, J., Zeni, J., & Cason, N. D. (1994). *Mirror images: Teaching writing in Black and White*. Portsmouth, NH: Heinemann.

Ladson-Billings, G. (1994). *The dreamkeepers: Successful teachers of African-American children*. San Francisco: Jossey-Bass.

Ladson-Billings, G. (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*, *32*(3), 465-491.

Lee, C. (1993). *Signifying as a scaffold to literary interpretation: The pedagogical implications of a form of African-American discourse* (NCTE Research Rep. No. 26). Urbana, IL: National Council of Teachers of English.

Lipka, J., & Mohatt, G. V. (1998). *Transforming the culture of schools: Yup'ik Eskimo examples*. Mahwah, NJ: Lawrence Erlbaum.

Michaels, S. (1981). "Sharing time": Children's narrative styles and differential access to literacy. *Language in Society*, *10*(3), 423-442.

Michaels, S. (1984). Listening and responding: Hearing the logic of children's classroom narratives. *Theory Into Practice*, *23*(3), 218-224.

Montagu, A., & Watson, F. (1979). *The human connection*. New York: McGraw-Hill.

Moses, R. P., & Cobb, C. E., Jr. (2001). *Radical equations: Math literacy and civil rights*. Boston: Beacon.

Pai, Y. (1990). *Cultural foundations of education*. New York: Merrill/Macmillan.

Philips, S. U. (1983). *The invisible culture: Communication in classroom and community on the Warm Springs Indian Reservation*. Prospect Heights, IL: Waveland.

Porter, R. E., & Samovar, L. A. (1991). Basic principles of intercultural communication. In L. A. Samovar & R. E. Porter (Eds.), *Intercultural communication: A reader* (6th ed., pp. 5-22). Belmont, CA: Wadsworth.

Shade, B. J. (Ed.). (1989). *Culture, style, and the educative process*. Springfield, IL: Charles C Thomas.

Sheets, R. H. (1995). From remedial to gifted: Effects of culturally-centered pedagogy. *Theory Into Practice*, *34*(3), 186-193.

Smith, G. P. (1998). *Common sense about common knowledge: The knowledge bases for diversity*. Washington, DC: American Association of Colleges for Teacher Education.

Smitherman, G. (1977). *Talkin' and testifyin': The language of Black America*. Boston: Houghton Mifflin.

Smitherman, G. (1994). The blacker the berry the sweeter the juice: African American student writers. In A. H. Dyson, & C. Genishi (Eds.), *The need for story: Cultural diversity in classroom and community* (pp. 80-101). Urbana, IL: National Council of Teachers of English.

Spindler, G. D. (Ed.). (1987). *Education and cultural process: Anthropological approaches* (2nd ed.). Prospect Heights, IL: Waveland.

Spring, J. (1992). *Images of American life: A history of ideological management in schools, movies, radio, and television*. Albany: State University of New York Press.

Spring, J. (1995). *The intersection of cultures: Multicultural education in the United States*. New York: McGraw-Hill.

Takaki, R. (1993). *A different mirror: A history of multicultural America*. Boston: Little, Brown.

Tannen, D. (1990). *You just don't understand: Women and men in conversation*. New York: Morrow.

Tharp, R. G., & Gallimore, R. (1988). *Rousing minds to life: Teaching, learning, and schooling in social context*. Cambridge, UK: Cambridge University Press.
Wade, R. C. (1993). Content analysis of social studies textbooks: A review of ten years of research. *Theory and Research in Social Education*, *21*(3), 232-256.
Webb, J., Wilson, B., Corbett, D., & Mordecai, R. (1993). Understanding caring in context: Negotiating borders and barriers. *Urban Review*, *25*(1), 25-45.

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