

THE TEACHER'S GUIDE TO DIVERSITY:
BUILDING A KNOWLEDGE BASE

Volume I:
Human Development, Culture, and Cognition

Elise Trumbull and Maria Pacheco

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The Education Alliance at Brown University
222 Richmond Street, Suite 300
Providence, RI 02903-4226

Phone: 800.521.9550
Fax: 401.421.7650
E-mail: info@alliance.brown.edu
Web: www.alliance.brown.edu

Authors: Elise Trumbull and Maria Pacheco

Editors: Elizabeth Devaney and Julia Noguchi

Designer: Sara Ladds

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About the Authors

Dr. Elise Trumbull is an applied psycholinguist whose research focuses on the relationships among language, culture, and schooling. A former elementary teacher, she directed the Bridging Cultures project at WestEd from 1996–2004, where she also collaborated on assessment research on English language learners. She is the author of five books, including *Bridging Cultures Between Home and School, Assessment Alternatives for Diverse Classrooms,* and *Language and Learning: What Teachers Need to Know*. She is co-author of *The Diversity Kit: An Introductory Resource for Social Change in Education*. She now teaches at California State University, Northridge and works as an independent educational consultant in Oakland, California.

Dr. Maria Pacheco is the director of the Equity and Diversity programs at The Education Alliance. She has 28 years of experience addressing issues of cultural diversity in urban schools and higher education. As a researcher, teacher, and program director, she has worked extensively in the areas of equity pedagogy, curriculum development, English language learners, literacy, and minority parent and community involvement. She is the co-author of *Claiming Opportunities: A Handbook for Improving Education Through Comprehensive School Reform* and *Approaches to Writing Instruction for Late-Adolescent English Language Learners.*

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TABLE OF CONTENTS

Executive Summary 1

I. Current Perspectives on Human Development, Culture, and Cognition 5

A. A Multidisciplinary Endeavor 10

Educational Psychology 12

Cognitive Psychology 13

Developmental Psychology 13

Cultural Anthropology, Educational Anthropology, Cultural Psychology, Cross-Cultural Psychology 14

Neurosciences 14

Sociology 15

Sociolinguistics 15

B. Current Conceptions of Human Development 16

Development Is Neither Random Nor Fixed 16

A Dynamic, Relational View of Development Makes Sense 16

All Levels (From Cell to Society) Form the Context for Development 17

Historical Context Should Not Be Overlooked 17

Generalizations About Human Development Are Risky 17

Emphasis on Emergence Rather Than Readiness 18

Emphasis on Dynamic Assessment Over Time, in Different Settings 19

C. Cultural Pathways to Development 20

Activity 1: Interpreting Proverbs – Cues to Cultural Values 22

Activity 2: Exploring Values, Beliefs, and Ideas 24

Culture, Development, and Schooling 25

D. Current Conceptions of Cognition and Learning 26

Constructivism 28

The Development of Mind in Activity 29
Activity 3: Applying Activity Theory 30
Information Processing Theory 32
Behaviorism 33

E. The Neurosciences and Education 34
What Do We Know? 34
Evaluating Some Common Assumptions 36
Where Do We Go From Here? 39

F. Notions of Intelligence 40
Can Intelligence Be Defined and Measured? 40
Is Intelligence General or Multiple? 41
Is Intelligence Inborn and Fixed? 44

G. Resources 45
Print Materials 45
Web Sites 46

II. Culture, Identity, and Schooling 47
A. Contributors to Identity 50

B. Identity Development 51
Activity 4: Personal History 52
Culture, Language, Race, and Ethnicity in Identity 54
Bicultural, Panethnic, and Mixed-Heritage Identity 57
Activity 5: Tensions in Identity 59
Historical Power Relations Reflected in the Present Day 60
Academic Identity 62
What Schools Can Do to Foster Positive Identity Development 63
Activity 6: Supporting Students' Ethnic and Academic Identity in School 64
Belonging, Motivation, and Achievement 65

C. Resources 68
Print Materials 68
Web Sites 69

III. Culture in Teaching and Learning 71
A. Changes in the Philosophy of Education 73
Activity 7: Exploring the Philosophy of Education 74

B. Principles for Learning and Teaching 75
Resnick's Principles of Learning 76
More About the Apprenticeship Model 78
Nieto's Principles of Learning 78
CREDE's Five Standards: Moving From Principles to Action 79

C. Culturally Responsive Pedagogy 85
Activity 8: Examining an Instructional Example 87
Linking to Students' Knowledge and Ways of Knowing and Learning 88
African American Students: Exploring Culturally Responsive Pedagogy 88
Implications for Teaching African American Students 89
Cultural Models for Engaging the World: Individualism and Collectivism 91
Activity 9: Deconstructing a Misunderstanding 92
Common Themes of Community and Collaboration 95
Developing a Sense of Community 95
Fostering Collaboration 96
Teaching to Multiple Intelligences 96
Activity 10: Exploring Your Learning Experiences 97
Activity 11: Capitalizing on Multiple Intelligences 101

D. Addressing the Achievement Gap 103
Activity 12: Listening to Students 104
Debunking the Deficit Myth 105
Activity 13: Challenging Cultural Assumptions 106
Activity 14: Examining Curriculum for Culture and Language 107
Inferior Genetic Heritage 108

The Culture of Poverty 108
Home Environment Factors 109
Maintaining High Expectations 110
Detracking for Equity 111
Intervening With Institutional, Cultural, and Individual Racism 113
Racism and Ethnic Stereotypes 114
Different Perceptions 115
Taking Positive Action 115
The Culture of School 117
Promoting a School Culture That Works for Teachers and Students 117

E. Resources 118
Print Materials 118
Web Sites 120

IV. Culture, Families, Communities, and Schools 123
A. Schools Connecting with Families 125
Activity 15: Challenging Cultural Assumptions About Parental Involvement 126
Different Culture-Based Expectations 128
Standard Forms of Parent Involvement 129
Barriers to Family-School Connections: What Can Be Done? 131
Activity 16: Overcoming Barriers to Family Involvement 132
Communication 134
Collaborating With Communities and Community-Based Organizations 135

B. Taking a Strengths-Based Approach 136
Cultural Capital and Funds of Knowledge 137
Resilience/Resiliency 138
Activity 17: Resilience and Student Learning 141

C. Resources 144
Print Materials 144
Web Sites 145

References 147



EXECUTIVE SUMMARY

Volume I

EXECUTIVE SUMMARY

What are the reigning theories of human development and cognition? How are human development and culture related? How does identity development intersect with achievement motivation? What is intelligence? How can our knowledge of human development inform our work as educators working with an increasingly diverse student population? What is known about how to work successfully with families from non-dominant cultural groups? In this volume of *The Teacher's Guide to Diversity: Building a Knowledge Base,* we tackle these questions and more. The four sections we describe below collectively point to a vision of schooling that is both an ideal and a possibility. Many educational leaders have said that we now know what we need to do; we just need the will to follow through.

In the first part of this volume, Current Perspectives on Human Development, Culture, and Cognition, we review recent literature on these topics as well as interrelationships among development, culture, and learning. The prevailing perspective is sociocultural and constructivist, based in the philosophy, research, and theory of Russian psychologist Lev Vygotsky. We show how human development is not only a function of biological, neurological, and cognitive growth; it is also a process largely mediated by and situated in social and cultural contexts. To understand human development and cognition, one must draw from multiple disciplines, such as cultural psychology, cultural anthropology, and sociology, among others. We present brief summaries that illustrate how each of ten disciplines has contributed to current understanding. In addition to supporting a sociocultural and constructivist view of learning and development, research increasingly indicates that intelligence itself is both multiform and changeable throughout life. Thus, there are good reasons to incorporate greater variety in teaching strategies and materials and to have high expectations for all students.

The second part, Culture, Identity, and Schooling, examines how students' healthy identity development and the ways schools foster that development are intimately related to their engagement in learning. Research shows a relationship among a sense of belonging (being accepted for who one is), achievement motivation, and learning outcomes. Identity can be complex, particularly for bicultural and mixed-heritage students. The messages students receive outside of their homes—particularly in schools—can affect how they see themselves academically and interpersonally. For these reasons, we have included a whole section on the topic of identity.

The third part, Culture in Teaching and Learning, moves from learning principles and standards that can guide high-level learning for all students to specifics of culturally responsive pedagogy. We use the example of African American students to illustrate how cultural links can go beyond curriculum content to the ways instruction is organized in the classroom. Readers will see connections between this example and the more thorough treatment of African American language styles and use in the *Volume II: Language.* A substantial portion of this section addresses what might be called equity pedagogy, that is, approaches and strategies that have been identified as

necessary and useful in promoting equity. Among these are anti-racist education, high expectations, and moving beyond deficit thinking. Finally, the section offers a vision of a positive school culture that works for teachers, students, and families.

The fourth part, Culture, Families, Communities, and Schools, reviews research and promising practices related to involving parents in the schooling of their children. Immigrant families, others from non-dominant communities, and those living in poverty face particular barriers to school involvement, but there are ways around those barriers. As important as specific strategies may be, perhaps even more important is the stance that schools take toward families. Research and theory suggest that a strengths-based approach works best; identifying what families can do as opposed to what they cannot or won't do results in much better outcomes. We use Benard's work on resilience, Moll's concept of funds of knowledge (Moll, Amanti, Neff, & Gonzalez, 1992), and Bourdieu's notion of cultural capital to think about ways we can capitalize on student and community strengths (Bourdieu, 1977).

Cultural Capital
The human, social, and material resources that families can use to reach desired goals; sometimes the term social capital is used to refer to the social networks and institutional supports available in a given community (Coleman, 1988, cited in Diamond, 2000).

If we combine what the past two decades have taught us about how students learn with a more inclusive philosophy—the belief that all students, not just a few, deserve a top-notch education, as called for by the federal No Child Left Behind Act of 2001—our society can make great strides toward meeting the needs of all students and establishing a truly democratic society. Most important to the process of addressing the needs of learners from a wide range of backgrounds is a positive, ongoing process of exploration and constructive conversation among the professionals who serve such students and between professionals and students' families.



PART I:

Current Perspectives on Human Development, Culture, and Cognition

CURRENT PERSPECTIVES ON HUMAN DEVELOPMENT, CULTURE, AND COGNITION

In this part of Volume 1, we synthesize current views of human development, cognition, culture, and their interrelationships. This is a broad domain, indeed, and readers must bear in mind that our treatment of these topics can serve only as an orientation. Meaningful approaches to human development, for example, have become increasingly multi-disciplinary—something we try to convey here by explaining contributions from several disciplines. Readers are encouraged to explore areas of particular interest further, and our recommended resources are intended to serve that purpose.

Human Development
The pattern of age-related physical, cognitive, moral, social, and emotional changes humans undergo during their lives, as a result of biological and environmental influences.

Culture
The total lifeways of a people; alternatively, a system of socially based models for thought and action that are unevenly distributed throughout a group; the lifeways or models for thought and action associated with an institution, such as the school.

Example: The typical American school has an implicit set of values that represent a model for how to go about the daily business of schooling children or young adults. Among these are the valuing of individual mastery of knowledge and skills linked to a range of content standards and of individual demonstration of learning through individual assessments; an expectation that students learn best when grouped with age peers and (at secondary level) according to ability or performance in order to learn best; the belief that individual districts and teachers are responsible for determining the best ways to ensure that students meet standards. Cooperative learning is valued for promoting learning and helping students to learn how to work in groups, but students generally have individual responsibilities and receive individual grades. This adds up to an independent cultural model of schooling, which contrasts with settings where learning is a group matter, individual assessment is of less concern, and students may be mixed by age level, much as siblings are in a family where they help each other learn and accomplish tasks (a more interdependent cultural model).

Cognition
Mental activity associated with knowing, perceiving, thinking, reasoning, problem solving, and remembering.

Learning
A change in the organization of one's mental structures caused by experience, which may be expressed by new behaviors.

Stage Theories of Development
Stage theories, such as those of Jean Piaget (1954, 1970, 1973) and Erik Erikson (1950, 1968) propose that human development occurs in identifiable periods (stages) that are sequential and predictable and reflect distinct and substantive changes in mental organization. Piaget's theory, probably the most influential theory of development in the 20th century, holds that there are four stages: 1) sensorimotor, during which the infant constructs an understanding of the world largely through interacting with it physically; 2) pre-operational, during which the child begins to use language and images to represent the world; 3) concrete operational, during which the child can reason about concrete events and objects; and 4) formal operational, during which the child (adolescent) begins to reason more abstractly and logically. Two important mental processes facilitate learning: assimilation, or the incorporation of new information into existing knowledge structures (schemata), and accommodation, or the adjustment of existing knowledge structures in order to respond to new information or learning.

Human development refers to the ways that people change systematically over time—physically, cognitively, morally, socially, and emotionally—as a result of biological and environmental influences (Lerner, 1998; Santrock, 2002). In this volume, we are largely concerned with cognitive development, which is related to knowing, thinking, and learning. However, other aspects of development are also relevant to students' success in school. For example, the complex construction of cultural/ethnic/racial/gender identity that becomes highly evident during adolescence is a product of several aspects of development and is an important factor in how children and adolescents see themselves as students (Steele & Aronson, 1995). We no longer speak strictly of child development, as if it were only in childhood that human beings develop. We know that development in all areas continues throughout a person's life, and hence many have turned to the terms *human* development or *lifespan* development.

Culture has been referred to as "the total way of life of a people" (Kroeber & Kluckhohn, 1952, p. 24). This broad definition incorporates everything from modes of dress and cooking practices to cultural rituals, social customs, religious observances, and ways of communicating, thinking, and behaving. Shore (2002) has suggested thinking of culture as a system of socially based models for human thought and action that are variably distributed throughout a group, much in the way that there is biodiversity within any population (Rodseth, 1998). Shared social institutions (marriage, family organization, work, and schooling) form the basis for people's mental models of how to act and think. For example, in some cultures, marriage means that women assume certain roles and men others; marriage is permanent except in case of death, or sometimes, when

the man decides that the marriage is no longer desirable. Not every person within the group will share every model. These models tend to remain invisible because they are so familiar (Gallimore & Goldenberg, 2001). This way of conceptualizing culture helps to unify the bits and pieces often cited as components of culture, and it recognizes variation among individuals within a culture.

Psychologist Sheldon White (in the Foreword to Cole, 1996) states:

> The words we speak, the social institutions in which we participate, the man-made physical objects we use, all serve as both tools and symbols. They exist in the world around us; they organize our attention and action in that world and, taken together, they create "alternative worlds." (p. xiv)

Whereas *culture* seems to include virtually everything bearing on people's lives, in this volume, we focus more on the ideational or symbolizing aspects of culture. We take this cognitive approach (Fetterman, 1989) because our interest is mainly in those aspects of culture most related to cognitive development and schooling: beliefs, values, knowledge, and ways of acquiring and demonstrating knowledge. We also show how cultural values and beliefs are reflected in parents' ethnotheories of how children learn and in their child-rearing practices.

Cognition can refer both to the set of processes involved in learning and the state of one's knowledge and understanding. Cognitive processes entail the perceptual (auditory, visual, and so forth), memory and organizational processes related to encoding and retrieval of memories, reasoning, and problem solving. Education focuses mostly on cognitive development, though all aspects of development are intertwined. As children develop, their cognitive processes become more complex and sophisticated (Woolfolk, 2005). They are increasingly able to see relationships among concepts and mentally organize them much more efficiently (Bransford, Brown, & Cocking, 2000).

Early in development, children may have excellent memory for familiar routines, but as they get older, they can use language to represent this knowledge to themselves and manipulate it mentally outside of its original context (Nelson, 1997; Vygotsky, 1978). As Nelson notes:

> In many ways language is the key to critical aspects of cognitive change. The dramatic transformations in children's thinking between the ages of 3 and 5 years are a function of the new potentials that language makes possible both cognitively and communicatively. The child can begin to understand another's point of view as represented in the other's expression of her understanding, and can supplement her own experientially based system of knowledge with knowledge gained indirectly from presentations of others (p. 112).

Learning is any change in the organization of one's mental structures. Change may occur as a result of explicit teaching or as the result of experience, observation, or self-instruction. Even learning a single new word results in some reorganization of a learner's mental lexicon: The new word is logged in memory not just as an individual piece of information but also in relation to other words in his or her vocabulary (Sigman & Cecchi, 2002). Learning and development "occur in reciprocal transactions" (Parrila, Ma, Fleming, & Rinaldi, 2002); that is, they are highly interactive and mutually supportive.

Critics of the grand theories of human development (e.g., Piaget's) have frequently pointed out that development is heavily influenced by learning, and that learning occurs through experiences

in a cultural context (Greenfield, 2000; Rogoff, 2003). Practices in Western schooling, which children enter by age 5 or 6, have a great deal to do with the typical course of early childhood development. As Rogoff notes:

> Differences in development are often considered to be differences in the rate of maturation along a natural developmental time course, perhaps sped up or retarded by generic environmental circumstances. Such an approach overlooks the near complete association of age with the specific experience of schooling in nations where school is compulsory. (Laboratory of Human Cognition, 1979, cited in Rogoff, 2003, p. 171).

Piaget's broad stages (sensory-motor, pre-operational, concrete operational, and formal operational) can be used to understand changes in children's thinking from early childhood through adolescence in a very large range of cultural settings (Cole, 1996; Greenfield, 2000; Piaget, 1954). The challenge lies in *how* to get at the child's thinking. As Cole and colleagues note in an early study, "Cultural differences in cognition reside more in the situations to which particular cognitive processes are applied than in the existence of a process in one cultural group and its absence in another" (Cole, Gay, Glick, & Sharp, 1971, p. 233, cited in Cole, 1996, p. 80). For instance, Greenfield has shown how Zinacantec mothers in Chiapas, Mexico, sense when their daughters are ready to move from a toy loom for weaving to a regular loom that requires the mental transformations associated with concrete operational thinking. Greenfield observes, "If one thinks of Piagetian stages as age-dependent sensitive periods, then learning how to set up a real loom using a warping frame can be seen as an activity that actualizes concrete operations in a culture-specified form" (p. 253).

A. A Multidisciplinary Endeavor

Investigating and understanding relationships among human development, learning, culture, and education are multidisciplinary endeavors. Disciplines such as educational psychology, developmental psychology, cognitive psychology, cultural anthropology, educational anthropology, cultural psychology, cross-cultural psychology, the neurosciences, sociology, and sociolinguistics (defined in Figure 1) have contributed to our current understanding of these relationships. In this volume, we draw from theory and research in all of these disciplines in order to provide a broad understanding of relations among human development, culture, and cognition. The implications for education are not always immediately clear, but we will guide the reader to approaches and practices that many lines of evidence suggest are justifiable and effective.

Figure 1: Definitions of the Disciplines

Educational psychology: The study of how people learn, particularly within school contexts, including what instructional strategies are most effective, under what conditions and with which students.
Developmental psychology: The study of age-related maturation and changes in human behavior over the life span, including the physical, emotional, social, moral, and intellectual domains.
Cognitive psychology: The study of mental processes and structures, including memory, attention, perception, reasoning, and the ways knowledge is organized.
Cultural anthropology: The study of human society and culture, concerned with understanding the values, beliefs, practices, and artifacts of groups.
Educational anthropology: The study of educational environments, using the techniques of anthropology, but with the purposes of identifying ways to improve schooling.
Cultural psychology: The study of human development within a cultural context and "culture's role in the mental life of human beings."[1]
Cross-cultural psychology: The study of human development in one culture as compared to another, often focusing on international comparisons (as opposed to comparisons of various cultures within the U.S., for example).
Neurosciences: A cluster of fields of study, concerned as a whole with the structure, function, development, and biology of the nervous system.
Sociology: The study of people's relations and behaviors as part of groups—whether the family, neighborhood, classroom, or a larger group, such as a town or country.
Sociolinguistics: The study of language use in social context, including perceived rules for interacting with others depending upon their age, gender, status, and so forth.

[1] Cole, 1996, p. 1

Research that can inform effective schooling practices may draw upon foundational knowledge in two or more of these disciplines. For example, the research of Lipka and colleagues in Alaska, who are developing culturally responsive mathematics curricula and instructional practices for Yup'ik students (Lipka, with Mohatt & The Ciulistet Group, 1998; Lipka & Adams, 2004), incorporates learning from cultural anthropology, educational psychology, and sociology. These researchers use ethnographic interviews (a tool of anthropology) to learn about traditional mathematics and science practices. They use educational psychology research methods to design instruments, train teachers, and evaluate the impact of new curriculum. And they use sociological knowledge of the community to understand the roles of people and institutions in relation to education.

The interdisciplinary nature of some of the recent contributions to education is illustrated by the scholarly path of Howard Gardner, best known for his theory of multiple intelligences (1988, 1999). Gardner, who focused on history, psychology, and sociology as an undergraduate, earned his doctorate in developmental psychology and specialized in cognitive psychology and its implication for education. He has also conducted neuropsychological research, notably on how the right hemisphere is involved in language (Winner, n.d.).

In addition, methods from one discipline have been borrowed to suit the needs of another: Ethnography, for example, has been borrowed from anthropology to study educational phenomena (Freedman, Simons, Kalnin, Casareno, & The M-Class Teams, 1999; Lipka et al., 1998; Lipka & Adams, 2004; Trumbull, Greenfield, Rothstein-Fisch & Quiroz, 2001). It can be convincingly argued that a good understanding of human development and cognition requires integrating knowledge from the domains listed above with others, such as linguistics (e.g., how language can be characterized), psycholinguistics (e.g., linguistic processes involved in oral and written language use), and history (e.g., studies of migration patterns). In fact, the research of Lipka and colleagues, mentioned above, incorporates a historical dimension as well because the traditional number system of the Yup'ik has interacted with that of Russians and others who migrated to what is now Alaska, beginning around 1740.

Educational Psychology

Research in the realm of *educational psychology* has shed light on many topics related to teaching and learning, such as how:

- children and adults learn in different kinds of educational settings (Bernard et al., 2004).
- various grouping patterns work with students from different linguistic backgrounds (Cohen & Lotan, 1994; Slavin & Madden, 1999).
- motivation operates (Ryan & Deci, 2000; Stipek, 2002) and how it may operate differently, depending on student background (Cokley, 2003; Rothstein-Fisch & Trumbull, 2005).
- teachers can support the growth of students' metacognitive processes (Pressley, 2002).
- those processes transfer from one language to another in the course of learning to read (Garcia, 2000).
- different testing formats affect the performance of English language learners (Abedi, Lord, Hofstetter, & Baker, 2000).

Cognitive Psychology

Cognitive psychology, with its emphasis on mental processes and structures, has provided insights on how:

- students remember what they learn (Anderson, 1995).
- readers mentally organize what they read in order to comprehend and remember (Jiménez, Garcia, & Pearson, 1996; Rumelhart, 1980).
- learners perceive and represent problems and self-regulate (Glaser, 2000).
- learning to spell in English is influenced by one's home language (Fashola, Drum, Mayer, & Kang, 1996).
- mental images facilitate learning and memory (Paivio, 1990).
- new learning is built on what one already knows (Bransford, Brown, & Cocking, 2000).
- people learn by doing and the nature of the knowledge they need to do so (Lesgold & Nahemow, 2001).

One of the most important findings of cognitive psychology research is that learning does not proceed exclusively from low-level to higher level concepts; children can also grapple with complex ideas before they have mastered basic skills (Ceci, 1996; Resnick & Klopfer, 1989). This finding has implications for students who are thought to need remediation. Such students also need curriculum that challenges them to think.

New theories of intelligence have come from cognitive psychologists (Sternberg, 1998) as well as from those trained in other disciplines who have a strong interest in cognitive aspects of development (Gardner, 1988, 1999). We discuss several of them below.

Developmental Psychology

From the field of developmental psychology, research can help educators understand how students develop intellectually (Bruner, Olver, & Greenfield, 1966; Flavell, Miller, & Miller, 1993; Piaget, 1954), socially and emotionally (Eisenberg & Mussen, 1989), and morally (Kohlberg, 1969; Turiel, 1998), and physically (Santrock, 2002) during the school years. This field of study helps us understand particular aspects of developmental phenomena in which all facets of development seem to converge, such as identity formation (Erikson, 1968). Yet, as Cole (1996) suggests, it is difficult to consider any aspect of human development outside of a cultural context, and identity development is a powerful illustration of that observation (see, e.g., Sheets & Hollins, 1999). Therefore, characterizations of development as universal are suspect, and educators will want to turn to theorists who take a cultural perspective (Bruner, 1996; Greenfield, 2000; Rogoff, 2003; Weisner, 2005).

Cultural Anthropology, Educational Anthropology, Cultural Psychology, Cross-Cultural Psychology

Assessing how culture fits into the picture of development, Howard Gardner notes, "Sense-making is inherently a cultural phenomenon. And so one must always think of the brain as inside a mind that is developing in a particular culture, and that must necessarily take on the coloration of life in that (itself ever-changing) culture" (Gardner, 1999, p. 79). Many of us learned a supposedly universal theory of development that was actually based on Western European and North American values and child-rearing methods. Research from *cultural anthropology, cultural psychology*, and *cross-cultural psychology* has shown that "normal" development varies from culture to culture, depending on how children are socialized by their parents and community (Greenfield & Cocking, 1994; Luria, 1976; Super & Harkness, 2002; Tharp & Gallimore, 1988). The fact that parents from different cultures may have very different goals for their children (and therefore different ideas about how children or adults should think and learn) allows us to understand why not all children in all cultures learn the same skills and behaviors on the same schedule or in the same ways.

Anthropologist George Spindler has spearheaded anthropological research on education, writing about what he calls "the ethnography of schooling" (1982). He said that one of the most difficult things that he had done as an anthropologist was to go into an elementary school classroom and "make the familiar strange." Everything just looked so "normal." Unlike traditional anthropology, which is focused on describing cultures and cultural practices, educational anthropology is oriented to describing and understanding with a view to improving the schooling process. Some of the best known work in the realm of educational anthropology has been done by Kathryn Au with Native Hawaiian students and their teachers (Au, 1980; Au & Jordan, 1981; Au & Kawakami, 1994). These researchers studied communication styles of Native Hawaiians and used parallel processes in the classroom to enhance learning reading skills.

Neurosciences

The neurosciences, particularly the study of brain behavior and brain-learning relationships (neuropsychology), have helped educators understand the brain as an organ whose development is affected by interaction with the environment (Caine & Caine, 1994; Diamond, 2001; Diamond, Rosenzweig, Bennett, Lindner, & Lyon, 1972; Kleim, Viz, Ballard, & Greenough, 1997). Also, research has yielded information about critical periods, which are time-limited windows of opportunity related to the development of sensory processes like sight (Hubel & Wiesel, 1965) as well as higher order processes like language (Lenneberg, 1967; Pinker, 1994).

A third area of research that has resonated with educators is research on differences between the left and right hemispheres of the brain. For example, in most people, the left hemisphere is specialized for linguistic processing and the right for spatial processing (Elman et al., 1997). Fourth, brain research (much of it on non-human primates) has revealed the *plasticity* of brains—particularly

young ones (Elman et al., 1997). What is meant by plasticity is that areas or structures usually devoted to one kind of processing can shift to new functions, so that a child suffering damage to the left hemisphere might develop language-processing abilities in the right hemisphere.

These findings, among others, have spawned a plethora of brain-based educational interventions, many of which are questionable from a scientific perspective (Bruer, 1999). We devote a section below to examining what neuroscience has to offer the educator.

Sociology

A sociological perspective is informative because humans are social creatures, and much of their learning is situated within groups of various sizes and kinds (Bronfenbrenner, 1979). Sociologists study group structures and relationships, from peer dyads to social institutions. They explore the influence of social and economic conditions on the lives of individuals and groups, considering such factors as status, power, poverty, racism, and politics (Rosenthal & Jacobson, 1968; Werner, 1990). Sociological research has broadened our understanding of the dynamics of heterogeneous groups in the classroom (Cohen & Lotan, 1994); the nature and sources of student resilience (Werner, 1996); how social factors and race interact to affect academic achievement (Ogbu, 1992, 2003); and the ways social policies, such as racial segregation, have affected schooling for particular students (Guajardo & Guajardo, 2004). Theories of change as related to schools are fundamentally sociological, focusing on how groups and institutions operate (Fullan, 1991).

Sociolinguistics

Sociolinguistics, a sub-field of linguistics, is particularly useful to education because of the prominence of language in the learning process and distinct differences in how children are socialized to use language—differences that may matter in the classroom (Erickson & Mohatt, 1982; Heath, 1983; Lee, 1995; Wolfram, Adger, & Christian, 1999). Sociolinguistic research on cross-cultural communication can be applied to the understanding of teacher-parent talk, when the teacher is from one background and the parent another (Greenfield, Quiroz, & Raeff, 2000). Interpreters who share a parent's cultural background often help to interpret not only the language but also the cultural context, for example, the expectations behind the words of a teacher or parent (Lopez, 2002). See "Communication" in the final part of this volume, Culture, Families, Communities, and School, for information on this topic. Classroom communication is discussed in the volume on language.

B. Current Conceptions of Human Development

Current theories of human development are focused more on processes than on content or products. They have several assumptions in common (Lerner, 1998):

1. Development means *systematic change* over the lifespan and *plasticity* in that process.
2. Change is *systemic*, that is, multiple levels of organization are integrated in the development process (from individual cellular biology to social groups [family, peers, etc.], culture, and history).
3. All levels of organization are situated in a historical context, and history continues to change (so development or how it is perceived can change, e.g., conceptions of adolescence).
4. All development occurs within particular individuals as well as social, cultural, and historical contexts. Generalizations about development are therefore very limited.

Development is Neither Random Nor Fixed

Development is systematic in the sense that new skills and understanding are built on old ones and capabilities in all domains become more complex over time (Bruner, 1983, regarding language). However, development is plastic, meaning that all along the way it can be influenced by internal mental activity (the person herself) and external activity (environmental input, including that of teachers, peers, parents, and so forth). According to Lerner (1998), "Not only is there no [DNA] master tape to be read out automatically, but the 'tape' itself can get variously chopped, rearranged, transposed, and amplified in different cells at different times" (p. 6). Current theory, supported by neurocognitive research, asserts that the open-ended aspect of development continues throughout the life span (Baltes, Lindenberger, & Saudinger, 1998). Of course, because new development is built on earlier development, there are constraints on plasticity as well. Here we are speaking not of the plasticity of the brain per se, but of the course of development. Lerner and Steinberg (2004) note, for example, "As compared to infants, the cognizing, goal-setting, and relatively autonomous adolescent can, through reciprocal relations with his or her ecology, serve as an active influence on his or her own development…" (p. 5). That kind of potential for self-regulating development continues throughout a person's life.

A Dynamic, Relational View of Development Makes Sense

According to many theorists, heredity and environment are in such dynamic relation to each other that arguments about how much nature versus nurture contributes to development are meaningless. These two elements are more than interactive: They are effectively fused (Lerner, 1986; Tobach & Greenberg, 1984). It is therefore a mistake to think one can evaluate them independently of each other. Genetic determinism, that is to say, that developmental outcomes (such as intelligence) are specified by one's genes, is thought to be a naïve theory, given what is now understood about the dynamic relationship of genes and environment throughout live (Gould, 1981; Lerner, 1998; McClearn, 1981 [cited in Lerner]; Valencia & Solórzano, 1997).

All Levels (From Cell to Society) Form the Context for Development

"[I]ndividual development involves the emergence of new structural and functional properties and competencies at all levels of analysis (e.g., molecular, subcellular, cellular, organismic) of a developmental system, including the organism-environment relational level" (Lerner, 1998, p. 5, synthesizing Gottlieb, 1992). Development is caused by the relationships among these elements in a larger context that includes many layers of social organization, from family through institutions in the wider society, such as schools and government (Bronfenbrenner, 1979). To understand an individual's development, one must consider the relations among all of these levels. Educators may not need to consider a student's molecular life (though some developmental issues involve a person's chemistry), but they do need to understand the student as developing within his or her family, community, and other social contexts.

Historical Context Should Not Be Overlooked

We are all products, in some way, of our personal and group histories. The history of an ethnic or cultural group (or gender or religion, for that matter) is the foundation for its current functioning within a particular larger society. One might think of the social privilege of Mayflower descendents, taken as a group, with the current United States. What about the status of American Indians and Alaska Natives, groups who collectively still number more than two million despite a history of genocide? Historical relations among sociocultural groups also form the backdrop for current relations among them. The example of African Americans and European Americans in the U.S. comes to mind as well as the example of the Serbs and Croats in the Balkan states. History continues to exert an influence on people's social relations and hence, on development and learning within the context of schooling.

Generalizations About Human Development Are Risky

Because of all of the variability in human development, attempts to create a universal description of its course are fraught with false steps. Even the most basic aspect of development, physical growth, takes place in relation to environmental factors such as access to nutrition and medicine. As mentioned, schemes of development that purport to be universal have been repeatedly thrown into question by research showing the relativity of all aspects of development to context (see, e.g., Bruner, Olver, & Greenfield, 1966; Cole, 2002; Rogoff, 2003). "Accordingly, contemporary theories focus on diversity—of people, of relations, of settings, and of times of measurement" (Lerner, 1998, p. 13).

One of the most powerful influences on development is formal schooling, so to compare those who have participated in that set of practices with those who have not yields little or no information about the *natural* development of either group (Rogoff, 2003; Scribner & Cole, 1981).

Emphasis on Emergence Rather Than Readiness

Emergence
The process of coming into existence over a period of time.

Readiness
The condition of being prepared; in development, the condition of being equipped to engage in certain learning experiences.

Conceptions of human development as the maturation of skills and abilities according to a biological schedule are linked with the notion of *readiness*. The term is probably most associated with reading, although kindergarten children in many school districts are still given general readiness tests, such as the Metropolitan Readiness Test or the Gates-MacGinitie Readiness Test, to determine whether they are ready to learn to read, write, and do arithmetic. Alphabet and number knowledge, motor skills, and ability to identify visual patterns are typical targets of assessment. An overview of issues related to kindergarten readiness testing concludes that such tests have some predictive validity vis-à-vis kindergarten performance but not beyond that grade (Mehaffie & McCall, 2002).

The term *emergence* is associated with a focus on processes of development and reflects the view that children (and adults) often gradually attain the skills and understanding necessary to engage in a particular kind of task, such as reading. The seeds of mature proficiency in a domain are sprouting long before they come to full fruition. Literacy theorists have coined the term *emergent literacy* to refer to children's developing understanding that print encodes word and meaning (Strickland & Morrow, 1989; Teale & Sulzby, 1991). Very young children often have some knowledge about literacy, for example, that books are sources of information or entertainment, that the print somehow represents spoken words, or that books in English open from right to left and proceed from left page to right page. A child who knows these things may still perform poorly on a readiness test that requires differentiation among letter forms or sequences yet be quite ready to learn such things. The fact that readiness tests in kindergarten are not longer range predictors suggests that experience and learning are more important determinants of the child's skill level.

Emphasis on Dynamic Assessment over Time, in Different Settings

> ***Dynamic Assessment***
> "A particular approach to the assessment of processes of thought, perception, learning, and problem solving in which teaching is an active and central part of the assessment procedure." Typical steps include taking an initial baseline measurement of student effectiveness with a task, teaching principles of thought and problem solving that may be required for learning the task, and a subsequent assessment of how well the student applies newly-acquired cognitive processes to the task (Feuerstein, R., Rand, Y., Haywood, C., Hoffman, M. B., Jensen, M., 1982, p. 22).

A dynamic approach to assessment is highly compatible with a developmental view of students and suggests that abilities emerge rather than appear full-fledged. This method of assessment, compatible with Vygotskian theory, emphasizes what a student knows and can do with and without assistance and how he or she learns best (Feuerstein & Feuerstein, 2001; Grigorenko & Sternberg, 1998; Pena, 2001). Focusing on how to determine both the student's current level of functioning and the student's potential for learning, the teacher interacts with him—sometimes probing, sometimes prompting. The student is tested, taught, and retested; during the process, the teacher or examiner evaluates how the student engages with the task. Typical testing assesses only the student's actual level of functioning; dynamic assessment attempts to identify what Vygotsky termed the student's zone of proximal development (ZPD), that is, what he or she is ready to learn next (Chaiklin, 2003; Pena, 2001; Vygotsky, 1986).

The ZPD is the developmental level at which a student can perform successfully with the aid of a more competent person. It can be thought of spatially as a place where students engage in learning through interaction with teachers, artifacts, or more capable peers. More recently, scholars have extended the notion of ZPD to a third space, that is, a hybrid space created when students interact with teachers or peers while engaged in learning (Gutiérrez, Baquedano-López, & Tejada, 1999; Gutiérrez, Rymes, & Larson, 1995). These scholars conceptualize this as a "space in which alternative and competing discourses and positionings transform conflict and difference into rich zones of collaboration and learning" (Gutiérrez et al., 1999, p. 286).

Some research has shown that with preschoolers whose language experiences do not parallel those of the dominant culture (African American and Puerto Rican), dynamic oral vocabulary testing can reduce test bias (Pena, 2001; Pena, Quinn, & Iglesias, 1992). One reason appears to be that for children who have little experience with test-like questions, mediation by the adult helps them focus on critical features of the task at hand. When they do poorly, the examiner cannot know whether it is because they do not have the knowledge or skills or simply because they do not know how to respond in the expected way to an unfamiliar situation. Therefore, good assessment elicits student participation.

Dynamic assessment is often used in conjunction with other assessment in order to get a full picture of a learner's cognitive development. The child's behaviors or performance on tasks are assessed at different times, via different methods, in different settings (individual, group; in and

out of the classroom; in the context of an instructional activity and independent of one), and with and without adult help. Such an approach yields a more realistic view of the learner's competence in different contexts as well as his or her potential. It is certainly in line with recommendations in the field of education, despite recent federal and state emphases on standardized, once-a-year testing (Anastasi, 1990; D'Aoust, 1992; Shepard, 1992, Stiggins, 1997; Valencia, Hiebert, & Afflerbach, 1994; Wiggins, 1993; Wolf, Bixby, Glenn, & Gardner, 1991). Dynamic assessment is a powerful complement to the standardized testing in which virtually all districts engage.

C. Cultural Pathways to Development[2]

Cultural Ecology
The study of the ways human groups relate to their environment, including the physical, economic, social, historical, and cultural environments.

Ecological Niche
The role or position of a group within an environment; different groups find particular roles that allow them to co-exist with others in the same environment, for example, not to compete for the same resources.

Ecocultural
Relating to cultural aspects of a person or group's functioning within a particular ecological niche.

Ethnotheory
The implicit concept of human development held by lay people (as opposed to psychologists); "an implicit definition of the ideal child and beliefs about what socialization practices will produce this ideal" (Greenfield et al., in press, p. 6).

Weisner (2002) argues, "The cultural pathways in which human development occurs constitute the most important influences shaping development and developmental outcomes" (p. 276). Weisner, who takes an ecological approach to human development, describes cultural pathways as being the everyday routines that families and children engage in that foster a particular course of development. These daily sets of activities "crystallize culture" because they reflect the goals and values of people, make use of local resources, involve people in relationship to each other, and are carried out according to a script that reflects the norms of the group for the particular activity (p. 275). These activities take place within a specific *ecocultural* context—a particular environment where people have shared cultural knowledge that is adaptive. Weisner's perspective is grounded in activity theory, which we will explore further below.

[2] Many development theorists have used this term (e.g., Weisner, 2005, and Greenfield et al., in press).

Many developmentalists like Weisner talk about the *ecological niche* occupied by a cultural group, meaning the role or position of the given group within a larger society. Super and Harkness (2002) use the term *developmental niche* to represent the combination of physical and social settings, the customs of child care and child rearing that are maintained (and changed) by a group over generations, and the *ethnotheories* of caregivers about human development. These ethnotheories tend to have stability across generations in rural, subsistence-based ecological environments but to change more, even within a generation, in fast-changing technologically oriented urban ecologies (Greenfield et al., in press).

Every cultural group has an unspoken set of prototypical goals for child and human development, representing an ideal to which child-rearing techniques are geared. This ideal child is quite culturally variable, and within the U.S., parents from different cultural orientations could be said to hold different concepts of the ideal child (Greenfield et al., in press). As suggested, it can be hard to recognize cultural values and beliefs because they tend to remain subconscious. One source of insight into cultural values is the proverbs of a group or society. For instance, "It is the wise man who wants what he has" communicates the value of accepting one's lot in life and making the most of one's talents or resources.

Activity 1: Interpreting Proverbs - Cues to Cultural Values

Instructions to Participants

Form groups of three or four. Using Table 1, read each proverb on the left column and jot down in the right column what value it seems to represent. Add one or two proverbs that you know from your own upbringing and note what values each conveys. Be prepared to discuss your thoughts with the whole group.

Table 1: Proverbs and the Values They Communicate

Proverb	**Value (or Cultural Expectation)**
You've made your bed; now lie in it.	
God helps those who help themselves.	
The nail that sticks up gets pounded down.	
Many hands make light work.	
The early bird gets the worm.	
None of us is as smart as all of us.	
The squeaky wheel gets the grease.	
Too many cooks spoil the broth.	
Don't beat around the bush; get to the point.	
Silence is golden.	
Better to be silent and thought a fool than to speak out and remove all doubt.	
Share and share alike.	
If you want to give God a laugh, tell him your plans.	
Stand on your own two feet.	
One hand washes the other.	
What's mine is mine.	
A rolling stone gathers no moss.	

Discussion

- **What impact have these proverbs had on you?**
- **Which proverbs stand for values that are typically thought of as dominant culture in America? What are those values?**
- **What other values are expressed by some of the proverbs?**
- **How could these different values lead to different behaviors in the classroom?**

One ethnotheory (noted in cultures that value interdependence) is that children develop best, that is, they maintain close, respectful ties to family, when the mother treats her baby as an extension of herself—kept in close physical contact throughout infancy—and relies on empathy and non-verbal means to communicate with the child (Azuma, 1994; Choi, 1992). Another ethnotheory (noted in cultures that value independence) is that children develop best when caregivers provide them opportunities to explore the environment and develop some psychological distance—and rely on verbal communication to bridge the physical distance (discussed in Greenfield et al., in press).

Scientific theories of development, such as those of Piaget, Erikson, or Vygotsky, are simply more formal and explicit versions of ethnotheories, with their own cultural roots (Greenfield et al., in press). One of the most important and interesting differences between developmental orientations that pertain to both ethnotheories and scientific theories has to do with the relative emphasis on fostering *scientific intelligence* versus *social intelligence* in growing children. Piaget was interested in Western scientific thought as a goal of development (Piaget, 1963/1977), whereas an African counterpart, Nsamenang (1992), has developed a theory of development that emphasizes social proficiency as a goal of development. Piaget's approach is associated with a broad cultural dimension called *individualism*, whereas Nsamenang's is associated with *collectivism*. In the former, technical cognitive skills are seen as ends in themselves; in the latter, they are seen as the means to social goals (Greenfield et al., in press). These differences in emphasis can cause conflicts in school settings when they remain invisible.

Dasen (1984) reports that the central component of intelligence among the Baoulé of Côte d'Ivoire is the willingness to help others. Likewise, among people living in the island nation of Chuuk in the Federated States of Micronesia, a prominent value is collaboration. According to a Chuukese educational leader, their language has many terms for collaboration, reflecting the importance of pitching in without being asked to, group accountability, and the joy people expect to experience when they help others (Trumbull, 2005).

Members of a sociocultural group are taught directly or indirectly that their culture-based ways of behaving and thinking are "true" or "right" (Garcia, 1994, p. 51). Geertz (1973) asserts that members of cultures go about their daily lives within "shared webs of meaning." But culture itself is often invisible to its practitioners or members (Greenfield, Raeff, & Quiroz, 1996; Philips, 1983). That is, people may not be able to articulate or identify the elements that create the shared web of meaning that underpins their own cultural experience.

Activity 2: Exploring Values, Beliefs, and Ideas

Instructions to Participants

Think about the values, beliefs, and ideas that are prevalent in your culture. Speculate on how those values, beliefs, and ideas may have emerged from the conditions members of your culture faced in the past. Use Table 2 to record your thoughts. Be prepared to discuss your thoughts with the group.

Table 2: Tracing Your Own Values and Beliefs

Value, Belief, or Idea	Where It Came From

Discussion

- **Share a value, belief, or idea from your cultural background with the group.**
- **Where might it have originated?**
- **How has it been functional, that is, how has it served members of the group well?**
- **Does it conflict with a value, belief, or idea that is prevalent in the dominant U.S. culture?**
- **How did this value, belief, or idea influence your experience and success as a student?**

Culture, Development, and Schooling

The field of anthropology has generally moved away from the whole concept of culture, ironically just as the fields of education and psychology have moved toward it as a source of explanation for human behavior (Shore, 2002). As messy a concept as culture is, it is an important dimension in the lives of students and institutions, such as schools. As with language, where the whole is greater than the sum of its parts, culture must be understood as a complex, multifaceted, and changing phenomenon that is not reducible to a list of discrete descriptors.

Hence, cultural theorists caution against conceptualizing culture as composed of individual, independent elements (Rogoff, 2003; Shore, 2002). They argue that culture needs to be viewed holistically or as an interwoven set of processes. In addition, as conditions change, so do cultures; thus, cultures are often described as dynamic. For instance, changes in opportunities for commerce with other groups may be reflected in changes in the roles of girls and women (Greenfield, 2000). So, the view of culture as a fixed set of features is very misleading.

The essential values and beliefs of families and educators shape notions of what learning is and how it occurs (Bruner, 1996; Greenfield, 2000; Hollins, 1996; Rogoff, 2003). Super and Harkness (2002) note that for developmental psychologists, "culture is usefully conceived…as the organization of the developmental environment" (p. 270). In fact, one of the most important changes in views of human development in recent decades is the recognition that culture plays a key role in it.

Members of the same culture vary widely in their beliefs and actions. How can we explain this phenomenon? The argument for a distributive model of culture addresses the relationship between culture and individual personality (Garcia, 1994; Schwartz, 1978). Gallimore and Goldenberg (2001) and Shore (2002) suggest that people do not consciously choose attributes from the total set provided by the culture. Rather, the conditions and events in our individual lives lead us to favor some over others, hence distributing different versions of the culture throughout the group. Garcia (1994) draws a distinction between cultural *heritage* and cultural *inheritance*. Cultural heritage

refers to what society as a whole possesses and a cultural inheritance is what each individual possesses. In other words, each individual inherits or takes on some, but not all, of the cultural heritage of the group.

When we encounter a culture that is different from our own, we are faced with a set of beliefs that manifest themselves in behaviors that differ from our own. Other people's cultures are often more apparent to us than our own, and many educators have consequently learned a lot about other cultures but very little about their own. Our own culture is often hidden from us, and we may simply describe it as "the way things are." Nonetheless, one's beliefs and actions are not any more natural or biologically predetermined than any other group's set of beliefs and actions; they have emerged from the ways one's own group has dealt with and interpreted the particular conditions it has faced.

Cultural values influence both human development (including language, values, perceptions, motivation, emotions, and interpersonal behavior) and schooling (how we teach and learn) (Greenfield, 1994; Heath, 1983; Lustig & Koester, 1999; Rogoff, 2003). However, as mentioned, cultural values tend to be subconscious, out of the range of scrutiny. It seems right, for example, to a preschool teacher to expect children to learn how to remove their outer clothing and hang it up in their cubbies. When a mother follows the child into the classroom to take care of those tasks, the teacher may worry that the child is being babied or made too dependent (Zepeda, Rothstein-Fisch, Gonzalez-Mena, & Trumbull, in press). However, from the parent's perspective, she is both maintaining closeness within the family and modeling how to be a good, helpful adult (Greenfield et al., in press). This kind of scenario is, no doubt, repeated countless times across the nation daily. However, because the values underlying behaviors are never fully explored or named, teachers and parents may not have the opportunity to understand differences in their rationales and expectations. Neither set of values is superior, but they certainly are different and potentially conflicting in cross-cultural settings like schools.

The ways that schools are organized and carry out their perceived mission reflect tacit values, culture-based styles of interaction, notions of how children learn best, and expectations for how students and their parents should behave. Some policies serve practical ends, such as the need to conserve resources or manage the daily life of schools, but even these are chosen within a context of culture-based beliefs.

D. Current Conceptions of Cognition and Learning

Contemporary views of cognition and learning are heavily cognitivist, meaning that they emphasize internal mental processes. Often, the emphasis is on higher level processes, such as the ways minds organize and interpret information, but perceptual and memory processes are fundamental to all forms of thinking. As Kozulin (1998) notes, language serves as a powerful means of conscious and unconscious management of perceptual and memory processes.

Learning is not only an individual, psychological process but also a social process involving a student's interaction with others directly or indirectly (Tharp et al., 2000; Vygotsky, 1978; Wertsch, 1991). Therefore, it is important to be conscious of values held by students and their families and of the cultural values implicit in schooling. In short, educators and others who work with

children and families can benefit from understanding the nature of the social contexts in which learning takes place at home and in school, how they may place different kinds of demands on children, and how skills and approaches children are learning at home can be marshaled in service of learning in school.

Unfortunately, most current reform efforts have not offered strategies for meeting students' learning needs based on their life contexts and ways of learning (Gallimore & Goldenberg, 2001). In actuality, culture has most often been considered an external factor that interferes with formal schooling (Valencia & Solórzano, 1997). By understanding learning as a sociocultural process, we look to sociocultural research for insights into how to organize schools and instruction to meet the needs of students from many different cultural and linguistic backgrounds (Au & Kawakami, 1994; Gallego, Cole, M., & The Laboratory of Comparative Human Cognition, 2001; Greeno et al., 1996; Wozniak & Fischer, 1993; Zeichner, 1996).

Constructivism
The cognitive theory that posits that learners actively develop new knowledge based on prior knowledge and new data; social constructivism emphasizes that this construction of knowledge is accomplished within a social and cultural context, using particular cultural tools; Vygotsky (often cited as the originator of social constructivism) stresses the importance of activity in context.

Information Processing Theory
The cognitive theory that claims that individuals actively take in and organize information for storage and retrieval by coding it in particular ways, using interpretive and memory strategies.

Behaviorism
The theory that learning can be inferred only from observable behavior; unlike cognitive theories, it does not rely on a theory of mind or infer mental operations from behavior; from the perspective of behaviorism, all behavior is learned through teaching by or observation of others, shaped by the use of rewards.

In the realm of education, the current, most influential theory of how people learn is *constructivism*; however, *information processing theory* has contributed a great deal to our understanding. *Behaviorism*, which has proven less useful in understanding how people learn and develop, still has something to offer educators who work with students with developmental problems who seem to benefit from the external shaping of behaviors that are dysfunctional. For instance, behavior modification has been shown to be useful in reducing the pica of developmentally disabled students. Pica is the consumption of nonfood items such as paste, glue, or paper (McAdam, Sherman, Sheldon, & Napolitano, 2004).

In this section, we explore constructivism more deeply than information processing theory and behaviorism because of its current primacy and sway in the field of education. Theories of intelligence have also played a strong role in shaping educators' views of learning and teaching. We discuss several such theories later on.

Constructivism

A constructivist view means that learners must make connections between their own understandings and new ideas and information from the environment, such as the classroom (Bransford, Brown, & Cocking, 2000). They need to actively engage in the work of establishing the relationship between curriculum and meaning in their daily lives. Whether students are learning by observing expert models (as in an apprenticeship approach) or participating in traditional teacher-directed instructional programs, they are actively constructing their own meanings (Bransford et al., 2000; Cobb, 1994; Perkins, 1999; von Glasersfeld, 1992).

Vygotsky and Piaget can be considered the fathers of constructivism, but neither used the term itself (e.g., Piaget, 1954; Vygotsky, 1986). However their versions of constructivism are quite different from each other's. Whereas Piaget emphasized the child's independent exploration of his or her environment, Vygotsky emphasized mediated interactions. Vygotsky's approach stressed the importance of the child's interactions with adults and peers in promoting cognitive growth. Learning, in his view, was an eminently social act, particularly in early development. From Vygotsky's perspective, active mediation by a "more competent other" ensures that children do not form misconceptions; Piaget accepted the notion that the misconceptions sometimes resulting from independent exploration could be corrected later by education. Recent research on mathematical education of young children supports the belief that early instruction about the properties of numbers can prevent a common error that children make—assuming that the properties of whole numbers can be applied to all numbers (Schmittau, 2003). That error leads to widespread problems in dealing with fractions, an issue many teachers have confronted: Fractions do not behave the same way whole numbers do, for instance, when they are multiplied.

Acknowledging the learner's active role does not diminish the important role of the teacher, but rather suggests that he or she must understand the student's point of view and prior knowledge in order to cultivate the most powerful learning experiences (Fitzgerald & Graves, 2004; George, Raphael, & Florio-Ruane, 2003; Tharp et al., 2000). In fact, the teacher is immeasurably important as a mediator or facilitator of learning who assists the learner in identifying and improving his or her cognitive processes and guiding the student into the zone of proximal development (Vygotsky, 1978).

This guide is grounded in the sociocultural theory of Vygotsky, who suggested (1) that human development and learning occur as a result of an individual's interaction with society and (2) that this interaction takes place in and is informed by a particular cultural context. Vygotsky's work emphasized that individuals make sense of their world through discourse and interaction with others. Thus, knowledge is socially constructed and situated in culture.

Vygotsky further posited that learning occurs when students are effectively *scaffolded* to acquire new knowledge; this happens as a result of classroom interactions. In scaffolding, teachers or more capable peers identify the knowledge that students already have and bridge that knowledge to acquire new knowledge. Scaffolding occurs in the zone of proximal development (ZPD).

Like Howard Gardner, Vygotsky has influenced thinking and research in several sub-disciplines of psychology, sociolinguistics, and education. His intellectual descendants include many whose work we cite in this volume: Jerome Bruner, Michael Cole, Reuven Feuerstein,[3] Ronald Galli-

[3] According to Vygotskian scholar Alex Kozulin, Feuerstein came to his notion of mediated learning without having read Vygotsky (Kozulin, personal communication, September 18, 2005), yet Feuerstein's theoretical framework of learning shares many features with Vygotsky's.

more, Howard Gardner, Claude Goldenberg, Patricia Greenfield, Kris Gutiérrez, Barbara Rogoff, Roland Tharp, Thomas Weisner, and James Wertsch, among others. All of these theorists have expanded on Vygotsky's version of sociocultural constructivism in their own ways.

The Development of Mind in Activity

Beginning most prominently with Vygotsky, in the 1920's (Vygotsky, 1986), the field of developmental psychology has been influenced by activity theory, an elaboration of social constructivism (Cole & Engeström, 1991, cited in Groves & Dale, 2004). According to activity theory, individuals construct new knowledge, with the help of other more competent learners and teachers, *in the context of particular activities*. The activity setting includes the learner, others who are participating, and the cultural tools that are being used (such as musical instruments, looms, pencils, and symbol systems like language).

Learning is mediated by cultural tools and by more competent others, such as the teacher. Certain tools, such as language, maps, diagrams, and mathematics, are psychological tools that mediate higher level thinking. Kozulin (1998) observes that the concept of psychological tools is a cornerstone of Vygotsky's theory of cognitive development. These psychological tools—chief among them, language—allow humans to "master psychological functions like memory, perception, and attention in ways appropriate to our cultures" (Kozulin, 1998, frontispiece). Research has shown just how linked to culture the form and use of such tools are: Young adults who move from one culture to another may have difficulties with new coding schema and graphic and symbolic devices such as numerical tables and maps (Kozulin, 1998). They may also have difficulties with broader cognitive activities such as applying knowledge to infer the meaning of a set of data or work with many sources of information to solve a problem (Kozulin, 1998).

Activity theory focuses on both a person's actions (external elements) and thoughts (internal elements) *in a particular sociocultural context*. Vygotsky believed that one's internal processes cannot be understood outside of the external activity in which they are situated. The context is both the immediate surroundings (including location, participants, and tools) and the cultural, social, and historical meaning of the activity. According to Minick (1997), Vygotsky argues that the "units of psychological theory must be defined such that they are at one and the same time units of mind and units of social interaction" (p. 122).

Cole and Engeström (1991) define an activity as a form of doing that is intentional and directed towards the creation of a physical or mental object. This in turn leads to an outcome (for example, learning, earning money). To describe an activity, activity theorists identify *the location of the activity* (in a factory? a school? the home?), *the community of participants* (an individual? a self-selected small group? the whole class?), *the object of the activity* (product), *the larger goal* (outcome), *the relationship between the object and the group* (such as the division of labor—who does what), *the relationships among the participants* (mediated by rules of behavior), and *the cultural tools used to accomplish the activity* (oral language, books, maps, a computer, a blackboard, paper). In the classroom, we would want to be sure to look at *the role of the teacher as part of the community*.

Activity 3: Applying Activity Theory

Instructions to Participants

Collaborate with two or three other class participants to identify an instructional activity one of you has used in the past. If possible, select an activity you believe was culturally responsive to the mix of students you teach or have taught.

Use Figures 2 and 3 to guide your analysis of the organization of the instructional activity. Take notes on the chart and on a separate piece of paper if needed so you can discuss your analysis with the whole group afterward. Note how students responded to the activity and how well the goal was met.

Figure 2: Activity Structure

Setting	
Community/Participants	
Object/Product	
Outcome/Learning Goals	
Teacher's Role	

Division of Labor (Student Roles)	
Rules of Participation	
Cultural Tools	

Figure 3: Activity Components Defined

Setting: where the activity takes place and what that space is like (e.g., description of physical space)

Community/Participants: the nature of the student group or groups (self-selected small groups or pairs, teacher-selected small groups or pairs, individuals, whole group)

Object/Product: the product on which students are working

Outcome: anticipated changes in a student's knowledge, skills, and understanding (the goal of the activity), usually assessed in some way using the product

Teacher's Role: the general way in which the teacher mediates the activity

Division of Labor: how each student contributes to the goal of the activity through his or her roles

Rules of Participation: norms for behavior during the activity

Cultural Tools: anything that helps students learn and complete the task at hand

(Some definitions are similar to those of Groves & Dale, 2004.)

Discussion

- **Is it useful to analyze an instructional activity this way? Why?**
- **If you were to change one element of the activity structure, how would it alter the dynamics of the activity?**
- **Why would it be advisable to vary the ways of organizing instruction?**
- **What new ideas did you get for organizing your own instructional activities?**

Information Processing Theory

Metacognition
The knowledge individuals have of their own thinking processes and strategies, and their ability to monitor and regulate these processes (Flavell, 1979).

Information processing theory has captured important aspects of the learning process; it has also been the key theory informing development of computer programs that help computers "learn" (Johnson-Laird, 1988; Schank, 1984; Schank & Colby, 1973). Like the constructivists, information processing theorists are interested in what goes on within the mind and brain. They are focused on the processes of learning rather than stages in development or the social contexts of learning. Therefore, their research attempts to identify and characterize the steps involved in performing mental tasks (Meece, 2002). Feuerstein, for example, has used information processing theory as well as sociocultural theory to design a program of assisted learning called "Instrumental Enrichment," through which the teacher takes the student through progressively more complex applications of mental processes, such as comparison, spatial orientation and analysis, and making inferences (Feuerstein & Feuerstein, 1991).

Information processing research has centered on attention; perception; encoding and storage of information in short-term, working, and long-term memory (Sweller, van Merriënboer, & Paas, 1998); and the metacognitive processes that regulate attention and higher cognitive processes (Anderson, 1995; LaBerge & Samuels, 1974; McClelland & Rumelhart, 1986; Pressley, 2002; Schank & Abelson, 1977). Some of the theoretical work in information processing has helped us understand aspects of reading comprehension (Pressley, 2002; Rumelhart, 1980), metacognition in general (Brown, 1987), and how chunking related information helps recall (Miller, 1956).

Although human beings from all points on the globe have the same basic mental capacities, people vary in their approaches to such cognitive tasks as remembering and problem solving

(Cole, 1996). Some differences are due to differences between groups in levels of formal education. When educational levels are equalized, many of those differences disappear (Greenfield & Bruner, 1966; Scribner & Cole, 1974). Other differences are due to what has traditionally worked best within a given environment. Cross-cultural studies on cognition present thorny problems because it is so difficult to devise tasks that are not culture bound or to avoid interpreting outcomes from one's own cultural perspective (Cole, 1996).

Behaviorism

As noted in Figure 1, behaviorism is a theoretical approach to learning that focuses strictly on observable behaviors. Because the mind is not directly observable, it is not a subject of inquiry or speculation. Learning itself is defined as an observable and relatively enduring change in behavior as a result of experience (Eggen & Kauchak, 2004, citing Skinner, 1953). According to Skinner, even the most complex learning can be accounted for in behavioral terms; the learner observes, imitates, and elicits some kind of consequence from his behavior. Positive or negative feedback (reinforcement) helps condition one's behavior. There is no need to invoke an internal "mind." Even language, the complex cognitive and social faculty that most distinguishes humans from other animals, was referred to as "verbal behavior" by Skinner, and according to him was explainable by behaviorist principles (Skinner, 1957).

Current educational applications of behaviorism are most commonly found in special education settings where students' behaviors interfere with their learning. Applied behavior analysis (formerly called behavior modification) can be used to help students become aware of and change specific behaviors, such as being aggressive or verbally inappropriate (Baldwin & Baldwin, 1998). A behavior is identified, its frequency of occurrence tracked on a chart, and the student is rewarded for a reduction in occurrences.

Behavioristic strategies are seen in classrooms in the form of chalkboard lists of students who have misbehaved or bulletin boards exhibiting the best papers. These actions are intended to provide motivation for good behavior or reward excellence. In addition, the latter practice can also be used to show other students good models of writing and the like. Teachers may use praise to build students' self esteem (Greenfield, Quiroz, & Raeff, 2000) or shape desirable behaviors (Slavin, 2006). Yet there are cultural differences in how praise is used or received (Greenfield, Quiroz, & Raeff, 2000; Lewis, 1995; Nelson-Barber & Dull, 1998). What constitutes reinforcement is by no means universal. Recent research with immigrant Latino third graders, for example, showed that a star chart to record students' achievements in learning multiplication facts was not motivating until the students themselves reorganized it to monitor and recognize *group* achievement rather than *individual* achievement (Rothstein-Fisch & Trumbull, 2005). Rather than competing for individual rows of stars, the students volunteered to help each other fill in the whole chart and cheered each other's accomplishments along the way. The notion of observational learning developed by Albert Bandura (1977) connects elements of behaviorism with elements of cognitive theory. Bandura theorized, "Most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action" (p. 22). Bandura identified four mental processes that are necessary for observational learning: attention, retention, reproduction, and motivation. An observer's failure to match a model's behavior may result from disruptions in any one of these processes.

E. The Neurosciences and Education

We explore this topic in some depth because it has generated such widespread interest and spawned a seemingly endless array of workshops, books, and materials that purport to help educators *teach to the brain* or design *brain-based learning* experiences. However, consumers of such products need to be cautious because many of the inferences educators are making are not biologically sound or educationally justified. Most brain research does not lend itself to broad inferences about educational applications (Bruer, 1999; Gardner, 1999a).

Misunderstandings about the relationships among brain development, cognitive development, experience, and learning can lead to faulty conclusions about some students' abilities or aptitude for learning. Child-rearing practices that are not in sync with the dominant European-American approach, for example, can be wrongly judged to produce less enriched environments that interfere with children's brain development. In fact, many misconceptions about the brain and learning abound in the literature and lore of popular U.S. culture. A persistent myth cited by Bransford, Brown, and Cocking in their book *How People Learn* (2000) is that we use only 20% (or less) of our brains. The implication is that something must be done to help us to tap the rest of the brain's potential. This misguided belief apparently derives from early brain research showing that much of the brain is silent when examined by computerized scans, but all that means is that the brain is engaged in higher functions not "directly coupled to sensory or motor activity" (p. 114)—activities that are not detectable with the technology. Other misconceptions arise, in part because educators are not typically trained in neurobiology or other neurosciences.

What Do We Know?

Researchers who have observed the surge of brain-based education tend to believe that at this time, the neurosciences do not tell us nearly as much as the fields of cognitive, developmental, educational, and cultural psychology do about teaching and learning (Bransford et al., 2000; Bruer, 1999; Gardner, 1999a). Neurobiologist Paul Grobstein, who conducts a summer institute for teachers on the brain at Bryn Mawr, says, "My concern is that people tend to jump on particular research findings and create great edifices of 'new educational programs' on them, whose weight they really can't bear" (Gabriel, 2001, p. 1).

Bransford et al. (2000) caution that educators need to be careful about adopting "faddish concepts that have not been demonstrated to be of value in classroom practice" (p. 114).

Accordingly, the key findings from neuroscience that have implications for education are (p. 115):

1. Learning changes the physical structure of the brain.
2. Structural changes alter the functional organization of the brain; in other words, learning organizes and reorganizes the brain.
3. Different parts of the brain may be ready to learn at different times.

We also emphasize three other findings of neuroscience that are discussed by Bransford et al.:

4. Not only do learning opportunities structurally alter the brain, but animal studies also suggest that *learning in a social context* alters brain structure more than isolated learning.

5. Enriched environments in which learners (rats) have the opportunity to engage in different kinds of activities and have control over doing so build connections in the brain—an outcome thought to be associated with greater learning (Turner & Greenough, 1985).

6. "[T]he brain 'creates' informational experiences through mental activities such as inferencing, category formation, and so forth. These are types of learning activities that can be facilitated" (Bransford et al., 2000, p. 127).

The last three conclusions are substantiated by psychological research and probably come as no surprise to any teacher. Point (5) actually consists of three propositions: Enriched environments are important, learners need to have the opportunity to engage in different kinds of activities, and learners need some control over their learning activities. Once again, educators will not be surprised at these conclusions. However, these points are wide open to interpretation. What is an enriched environment? What are the nature and number of activities that should be available (for whom, at what age, and in what context)? And finally, what is the right kind and amount of control for a learner to exercise? As readers will see as we discuss these findings, there are no easy answers to these questions. Cultural and individual differences affect how they may be interpreted.

As much as we emphasize the role of learning and development, in part to warn against reductionist conclusions about critical periods, it is equally important to acknowledge point (6) above, which reflects a key principle of brain organization and function. According to Grobstein (personal communication, 7/17/05), "Brains are not only the result of experience. They have characteristics that vary from person to person that are independent of experience. Moreover, *they are capable of creating things independent of experience*" (emphasis added). Grobstein observes that development and learning are important, but they are "far from the entire story." Brains effectively have two modules, the neocortex (where higher level mental activity takes place) and the rest of the nervous system, which manages a vast amount of information processing and adaptive behavior that is not conscious. The neocortex is responsible for our inner experiences, our imagining, thinking, analyzing, and turning our experiences into narratives—activities that can go on without dependence on external input (Grobstein, 2005). Rich educational experiences, however, can certainly stimulate a student's inclination to these kinds of neocortical activity.

With regard to having control over one's learning activities, Kurt Fischer (cited in Gabriel, 2001), who is director of the Mind, Brain, and Education program at Harvard Graduate School of Education, states, "If the animal is in control of the experience, then there is a much more powerful effect on brain structure than if the animal has no control and the experience just sort of happened to the animal" (p. 3). James Zull, a biology professor at Case Western Reserve University, addresses the control issue in talking about how external rewards and punishments work (cited in Ohlson, 2003). Zull hypothesizes that extrinsic rewards like treats, grades, and recognition that are intended to motivate students sometimes have the opposite effect "because the brain is hard-wired to maintain control over the body's actions, and external rewards and punishments can be perceived as threats to the brain's control" (Zull in Ohlson, 2003, p. 32). Educational psychology research has shown the same reverse effect when the student's control or self-determination is missing (Boggiano, Main, & Katz, 1991; Deci, Koestner, & Ryan, 1999, 2001). However, what a student subjectively experiences as control is culturally variable (Iyengar & Lepper, 1999).

Neuroscientific research has also contributed to new conceptions of intelligence. It suggests that there are somewhat separable components of intellect (modules) that can be selectively damaged or developed (Bransford et al., 2000; Pinker, 1997). Stroke or injury can cause loss of language,

visual-spatial abilities, motor skills, mathematical skills, interpersonal skills, and ability to plan complex acts. One or more of these capacities can be badly damaged while the others are spared. Gardner (1983) uses this fact as evidence in support of the existence of multiple intelligences.

Evaluating Some Common Assumptions

Most educators have been exposed to several assumptions about the brain and learning. Many have undoubtedly relied on them to improve their teaching. Some assumptions have implications primarily for early childhood educators and caregivers, while others for educators at all levels. We will examine them critically to see how they hold up under research-based scrutiny. These assumptions are worth examining because of the practices they can drive. To take one unfortunate example, if a teacher believes that she can teach one brain hemisphere to develop more by engaging students in a particular physical exercise, she will be wasting instructional time because there is no proof that that is possible.

These are the most common assumptions:

1. The most important brain growth occurs from the pre-natal period to age 3.
2. There are critical periods for the development of specific skills and capacities; if such windows of opportunity are missed, children's development in those areas will be damaged.
3. Enriched environments promote brain growth and are especially important in infancy and early childhood.
4. Young brains have developmental plasticity and they can be molded through particular training and experience.
5. Education should be designed to maximize brain development and capitalize on how the brain works.
6. Education should be designed to teach both the left and right hemispheres.

With regard to the first four assumptions, it is true that infancy and early childhood appear to be periods of rapid growth in synaptic connections in the brain; and basic sensory and motor developments are hampered if children receive little or no stimulation, as we will discuss later on. Brain damage in young children is less likely to cause permanent disability than in older people (the plasticity factor). However, the following facts must be considered as well in relation to these six assumptions (based on Bransford et al., 2000; Bruer, 1999; Elman et al., 1998; Gazzaniga, 1998; Johnson, 2001; Neville, 1995; Pinker, 1994):

1. Different parts of the brain mature at different rates, and some structural and functional brain changes continue into adolescence.
2. Part of brain development consists of selective pruning or inhibition of synaptic connections (adults have fewer connections than 2-year-olds), so sometimes less is more.
3. There is no straightforward relationship between the number of synaptic connections and a child's intelligence, except perhaps at the extremes (many fewer than average or many more than average).

4. There is considerable normal variation in humans in the numbers of neurons and connections among them in the brain at different stages of development.
5. The studies on which estimates of brain growth are based are either animal studies or human studies with relatively small numbers of brains at any given age level.
6. Most learning takes place after the brain stabilizes, that is, after age 3 or later, and learning continues to reorganize the brain structurally and functionally.
7. The human brain exhibits plasticity throughout the lifespan, but young brains are more plastic; in other words, areas not normally dedicated to a particular function (such as language processing) can adapt to serve a new function.
8. There is no existing research than can guide parents or teachers as to when or how to train particular parts of the brain.

Critical Periods and Enriched Environments. The notion of *critical periods* is a contested and complex concept, and it is no wonder that popular misconceptions about it are abundant. A critical period is a span of time in development when a particular type of skill or faculty emerges in interaction with environmental input. If that period is passed without the appropriate input, the faculty either does not develop or develops incompletely. Two good examples of developmental abilities that are linked to a critical period are visual perception (Hubel & Wiesel, 1965) and language (Curtiss, 1977; Lenneberg, 1967; Pinker, 1994).

Lack of exposure to various kinds of visual patterns can leave the developing organism incapable of perceiving such patterns throughout life. Temporary blindness in one or both eyes of a human infant can lead to the inability to use the eye(s) with full success, even after the blindness has passed (Bransford et al., 2000; Johnson, 2001). However, in the case of infants with cataracts in the early months of life, removal and exposure to visual patterns do result in rapid improvement in visual perception that compensates in part for the early visual deprivation (Johnson, 2001).

Lack of exposure to language (a first language) before puberty apparently results in the inability to acquire full linguistic proficiency—particularly in the realm of syntax (Pinker, 1994). There are very few cases to go on, but research suggests that it is not safe to assume a child can acquire the full language capacity past age six and a half or seven (Pinker, 1994).[4] However, because of the paucity of cases and individual variation, generalizations are very risky. The most famous case is that of "Genie" (Curtiss, 1977), who was discovered in Los Angeles at the age of thirteen and a half, stunted in growth and speaking only a few words. Genie had been kept a prisoner in a small, sparsely furnished bedroom, tied to a potty seat most of the day, and kept in a virtual straitjacket by night. When she made noise of any kind (including vocalizations), her father would beat her. With the help of linguistic researchers and social service workers, Genie made some improvement physically and linguistically. However, she did not develop the normal syntax of even a four year-old; nor did she learn to use language in all of the ways a normal pre-schooler can, despite years of intervention.

Alex, a 9-year-old boy who had never spoken, began to speak after his left hemisphere was removed to treat a rare brain disease (Vargha-Khadem et al., 1997). By age 15, Alex was judged

[4] If a first language has been learned, a person can learn another language, but usually without the ability to sound like a native speaker after the age of 12 or so. Of course, there is great individual variation in second-language learning.

to have language normal for an 8- to 10-year-old. This case demonstrates the plasticity of the brain. It is important to remember that Alex had been exposed to language and had shown comprehension of single words and simple commands prior to the operation. Unlike Genie, he had been immersed in a normal environment full of language and ordinary daily experiences.

Children whose early childhood is spent in an environment like an overcrowded orphanage, where there is little cuddling and holding, may not form secure attachments to their caregivers or develop normally emotionally and intellectually (Ainsworth, 1973; Bowlby, 1989). For instance, infants who had been placed in Romanian orphanages spent most of their day in cribs and received little direct touch or stimulation from caregivers exhibited social withdrawal and repetitive movements (Carlson, 1998). Lack of touch, it seems, is associated with high levels of a stress hormone involved in regulating brain development and behavior. "The children with the most abnormal levels of stress hormone also showed the greatest delays in physical, mental, and motor development" (Carlson, 1998, p. 12). Also important is the discovery that high-quality caregiving can reverse many of these early effects (Carlson, 1998).

Educators and parents should bear in mind that the dramatic deficits documented in the medical, neuroscientific, and psycholinguistic literature have occurred as a result of extreme deprivation. There is nothing to suggest that children need exceptional input in order to acquire the full range of sensori-motor and higher order mental abilities. Development is lifelong, and some patterns of localization of brain function in which particular areas are established to handle certain kinds of processing are apparently not fully set until age 15 or 16 (Neville, 1995).

With regard to the issue of providing enriched environments to increase neural connections, there is no clear translation from research on rats to humans. Setting aside the issue of how we would actually know when we are increasing connections and neural branching within the brain, how do we define an enriched environment? Fogarty (1999) suggests that practitioners interpret an enriched environment to include vast amounts of printed posters, writings, mobiles, and student artwork; classrooms overflowing with beanbag chairs, rugs and pillows, and print materials; science corners replete with greenery, animals, and rock collections; and listening stations containing an array of musical selections. But this picture is based on a set of culturally based assumptions about what is enriching. Students from different backgrounds would most certainly be stimulated by different environmental input. There is no universal formula for deciding which pictures or posters, music, or other visual, verbal, or tactile input are most desirable to stimulate development.

Some would argue that nature itself provides the most complex stimulation, with its variety of flora and fauna, complex visual patterns, changes in weather (stimulating many senses), natural environmental sounds, and opportunities to observe the growth and development of other organisms. We think that teachers would do best to begin with a challenging curriculum, influenced by students' interests and experiences, and design a classroom environment in service to that curriculum—an environment that evolves with student input over time.

Is enrichment in the home equivalent to electronic toys, a library of children's books, private music lessons, and trips to museums? Surely this is a culture-bound notion of an enriched environment. Teachers may erroneously believe that students from non-middle-class backgrounds do not get the early stimulation they need to develop complex brain patterns. Suddenly, the deficit theory is alive and well, and schools are relieved of the responsibility of ensuring the success of certain segments of the student population or, just as bad, charged with improving parents' approaches to child rearing.

Teaching to and Training the Brain. In general terms, neuroscientific research does suggest that students' brains are best tapped and their minds best developed through active engagement in a variety of tasks over which students have some control. Note, however, that it is not only higher order thinking that students need to develop: Repetitive practice builds proficiency in many tasks (Bransford et al., 2000.) It also appears that learning in a social context is particularly powerful. However, the neuroscientific literature does not provide explicit guidance for how to train the brain in any way that is currently meaningful for the educational arena. For instance, one cannot train the right or left hemisphere; the hemispheres work together, even though they do have some specialized functions in most people. The two hemispheres communicate via the corpus callosum, a network of white matter fibers that ensures constant communication between them (Gazzaniga, 1998). Complex tasks engage many parts of the brain at once, and it would be difficult to selectively activate one hemisphere or the other.

Nevertheless, the left/right brain distinction is useful as a metaphor for how schooling is structured—that is, the left brain as a metaphor for linear/analytical/linguistic/logico-mathematical thinking and the right brain as a metaphor for holistic/visual/artistic thinking—and as such can be used to help teachers ensure that their teaching engages many different kinds of cognition and reaches many different kinds of students.

Where Do We Go from Here?

Neuroscience has by no means answered all the questions educators and parents have put to it. The subfields of psychology are far more productive in that regard. Books on educational psychology (Eggen & Kauchak, 2004; Slavin, 2006), cognitive and developmental psychology (Gardner, 1985, 1999a; Meece, 2002; Santrock, 2002), cultural psychology (Cole, Engeström, & Vasquez, 1997; Goldberger & Veroff, 1995; Nucci, Saxe, & Turiel, 2000; Rogoff, 2003), education (Gardner, 1999a; Hollins, 1996; Sheets & Hollins, 1999; Trumbull, Rothstein-Fisch, Greenfield, & Quiroz, 2001), and language, cognition, and culture relationships (Nelson, 1996; Pérez, 2004; Trumbull & Farr, 2005) are more likely to provide useful information to educators. Books written by authors with biological and educational backgrounds are probably the best resources for educators who seek to understand defensible hypotheses about brain-education relationships (Dawson & Fischer, 1994; Zull, 2002) or the neurosciences (Gazzaniga, 2004; LeDoux, 2001).

A safe way to judge the reliability of claims of brain-based approaches to teaching is to see whether they converge with findings from other disciplines. Bransford et al. (2000) identify one such convergence. An interesting feature of linguistic function is that different regions of the brain are associated with hearing words, speaking, reading, and writing (Calvin & Ojemann, 1980; Goodglass, 1993). Bransford et al. suggest that this is an argument for integrating language arts instruction, that is, to facilitate connections among the various forms and modalities of language. In fact, literacy research bears out the assumption that integrating the language arts results in superior learning (Calderón, Hertz-Lazarowitz, & Slavin, 1998; Tierney & Shanahan, 1991; Vernon & Ferreiro, 1999). Other research from educational psychology converges with the conclusion that integrated instruction may be a preferred approach. A large-scale study conducted by Knapp, Shields, and Turnbull (1995) revealed that instruction that makes explicit connections between one subject and the next, and between what is learned in school and in children's home lives, yields results superior to those of conventional practice.

F. Notions of Intelligence

Intelligence
The ability to learn, that is, to problem solve and modify one's mental organization and behavior to adapt to new situations; sometimes characterized as a general learning faculty (designated by *g*) or a set of multiple learning faculties (MI).

There are several unresolved, troublesome issues related to the construct of intelligence that have implications for educators. Those issues include whether intelligence:

- can be reliably defined so that the definition applies cross-culturally. (What is it?)
- tests measure learning capacity or just what has been learned. (What can be measured?)
- is a general capacity or a set of multiple and distinctly different capacities. (Is it one thing or many?)
- is heritable, and to what degree? (Is it inborn?)
- is fixed or mutable. (Can it be changed?)
- is useful as a construct in understanding human development and learning. (Is there a point in measuring it?)

We will touch on all of these issues in this section.

Can Intelligence Be Defined and Measured?

Intelligence can be defined many ways, and these ways are always consonant with what a culture values. Some place greater value on social intelligence, some on verbal and mathematical intelligence, and some on what could be called moral intelligence—the wisdom to apply what one knows to the betterment of one's society.

Among psychologists who theorize about and study intelligence, there is no absolute agreement on exactly what it is. Psychological research and theory have provided new perspectives on what counts as intelligence. In the past, intelligence was conceived of as a general faculty (*g*) that is inherited and fixed (Jensen, 1969). Now, it is most often conceived of as a set of relatively independent faculties (multiple intelligences) (Gardner, 1983, 1999b; Perkins, 1995; Sternberg, 1998) that are mutable on the basis of experience (Gardner, 1999a; Resnick & Resnick, 1992).

A fundamental problem in measuring intelligence (even if one decides what it is) is that it can only be inferred from behavior (Valencia & Solórzano, 1997). Performance on a test, particularly one that only samples a domain (e.g., a test of linguistic proficiency), cannot always reasonably be inferred to capture a person's true proficiency in that domain. Adequate domain sampling is a major component of test validity (Messick, 1989). Even if a test is designed to measure the exact skill or criterion of interest (writing the alphabet, for example), a student's performance may

vary from one time of administration to another—even on the same day—because of changing factors in the student (including his state of mind or body) or in the setting (e.g., alone in the psychologist's office or with peers in the classroom).

Variability in performance within a student from one time to another or on tests of similar content reflects problems in reliability (Salvia & Ysseldyke, 1995).[5] Suppose that we want to gauge intelligence by a test that does not directly test the actual criterion: The same sources of potential error still prevail, *and* we are going to make what is called a *second-order inference* based on the student's performance. Intelligence cannot be assessed directly; rather, it must be assessed through a finite number of tasks administered in a particular way at a particular time that are presumed to tap intelligence. Then, intelligence must be inferred from the resulting performance. Accordingly, a host of problems emerges with coming to agreement on what intelligence is, and another host of problems is involved in measuring it.

Is Intelligence General or Multiple?

The view of intelligence as a unitary capacity defined largely by linguistic and logic-mathematical abilities has been deeply questioned in the past few decades (Gardner, 1983, 1988, 1991; Sternberg, 1985, 1997). The theory and research of Gardner and Sternberg, as well as Perkins (Perkins, 1995; Perkins & Tishman, 2001), have expanded the ways intelligence is conceptualized. Each of these researchers believes that envisioning intelligence as a single capacity is incompatible with new understandings of human cognition. Their work suggests that rather than a general intelligence capacity, denoted by *g*, individuals have multiple intelligences, or MI. However, Gottfredson (1999) disagrees with the assertion that there is no *g* factor, pointing to the correlations among scores on different kinds of measures of intelligence. However, the tests to which she refers assess a relatively narrow range of intelligence.

Sternberg, a cognitive psychologist at Yale University, has developed what he calls a *triarchic* model of intelligence (1985). He describes three types of intelligence: *analytic* (also called the componential dimension), *creative* (also called the experiential dimension), and *practical* (also called the contextual dimension). These three elements combine to form a person's overall intelligence, which Sternberg has defined as "mental activity directed toward purposive adaptation to, and selection and shaping of real-world environments relevant to one's life" (1985, p. 45). Table 3 below characterizes the three components of the triarchic model.

[5] Variability in the scores assigned by different raters can also undermine reliability.

Table 3: Triarchic Theory of Intelligence

Analytical (Componential)	Creative (Experiential)	Practical (Contextual)
Ability to process and analyze information and develop new knowledge; the capacity associated with academic problem solving sub-components: • metacomponents equivalent to executive functions for planning, monitoring, and evaluating cognitive processes • performance components for executing plans and strategies and processing information (e.g., encoding, remembering, retrieving.) • knowledge acquisition components involved in acquiring and storing information/ constructing new knowledge	Ability to have insights, synthesize information, and respond to familiar and novel situations effectively sub-components: • novelty skills ability to respond effectively to novel demands in the environment • automatization skills ability to engage in automatic information processing in the face of familiar demands	Ability to respond adaptively to the demands of daily life within a particular environment and alter one's environment to meet one's needs

The metacomponents of analytical intelligence are parallel to metacognition, discussed earlier. Metacognition—such as knowledge, awareness, and control of cognition—is an outcome of reflection (Wilson & Jan, 1999, p. vii).

Perkins, a colleague of Gardner in Project Zero at Harvard, has identified three dimensions of intelligence: neural, experiential, and reflective. He characterizes these three dimensions as "contrasting causal factors that all contribute substantially to intelligent behavior" (2002, p. 2). Neural intelligence is the biologically based efficiency of the nervous system; experiential intelligence is the expertise in a particular domain (physics, carpentry, or violin playing, for example, to use Perkins's examples); and reflective intelligence is composed of "mental management," such as problem-solving skills, ability to monitor one's state of knowledge, and ability to use strategies to improve one's thinking.[6] These skills are parallel to the metacognition skills mentioned earlier.

Perkins (2002) notes that reflective intelligence is the most likely target for improvement through education because it is the most learnable. Neural intelligence does not change much, and experiential intelligence in specialized areas takes years to build. Perkins and colleagues

[6] Reflection involves analyzing and making judgments about what has happened; it is integral to every aspect of learning. It precedes, is a part of, and occurs after learning (Wilson & Jan, 1999, p. vii).

have devised strategies that can be used by teachers to help students build their thinking skills, in part by making thinking "visible" (Perkins, Tishman, Ritchhart, Donis & Andrade, 2000; Perkins & Tishman, 2001; Tishman & Perkins, 1997). They suggest that teachers can model and talk about ways of thinking, helping students to understand the differences among terms such as "hypothesis, reason, evidence, possibility, imagination, and perspective" (Perkins, 2002, p. 2).

Gardner is probably the best-known MI theorist to educators, who have found his theory explanatory of the kinds of differences they have observed in their students and who have immediately seen how Gardner's multiple intelligence theory can be applied to the classroom. Gardner moves beyond the usual candidates for components of intelligence, such as linguistic, mathematical, and spatial abilities or information processing skills like memory and retrieval, to include faculties that have usually been referred to as talents or personality variables. Originally, Gardner (1983) identified seven intelligences: linguistic, logico-mathematical, spatial, musical, bodily-kinesthetic, interpersonal, and intrapersonal. In recent years, he added "naturalistic" to the list and has considered including both "existential" (dealing with the big questions of life) and "spiritual" (exemplified primarily by religious inclination) intelligences.

Table 4 below summarizes the meaning of each of the eight intelligences Gardner has proposed.

Table 4: Gardner's Multiple Intelligences

Linguistic ability to use language for many purposes, to learn languages, and to use language expressively	**Logical-Mathematical** ability to use mathematical operations, detect patterns, reason deductively, and think logically	**Spatial** ability to recognize and use spatial patterns
Musical skill with the performance and appreciation of musical patterns as well as sensitivity to musical pitches, tones, and rhythms	**Bodily-Kinesthetic** ability to use one's body in skillful ways to solve problems or use one's mental abilities to engage in coordinated movements	**Interpersonal** ability to sense others' motivations, feelings, and desires
Intrapersonal ability to be aware of one's feelings and motivations and use this awareness to regulate one's life	**Naturalistic** ability to identify and categorize features of the natural environment	

(Adapted from Gardner, 1983, and Smith, 2002)

Multiple intelligence theory suggests that every individual possesses each of the eight intelligences to some degree, but that within any individual some of the intelligences are more highly developed than others. Hence, each person would have his or her own intellectual profile.

As important as identification of the intelligences are the criteria Gardner has proposed for deciding whether a human capacity counts as an intelligence. Among these are its potential for selective impairment by brain damage (that is, that other abilities are not impaired at the same time), the existence of prodigies within the particular domain of intelligence, a distinctive developmental history, susceptibility to encoding in a symbol system, a core operation or set of operations, and support from testing and research (Gardner, 1983, pp. 62-69).

The implications of the multiple intelligences view for education are profound. The notion of multiple intelligences, along with values of equity, constitutes the foundation of schooling designed to provide opportunities for all students to learn and achieve at high levels. When teachers recognize many different ways of being intelligent, they are likely to see more students as being capable. Moreover, "[teachers'] beliefs about students' capability have enormous power. Learning depends on the degree to which classrooms foster students' belief in their own competence and willingness to work hard" (Oakes & Lipton, 1999, p. 228).

Not all forms of intelligence have equal potential to provide students with economic opportunity. Whereas all forms of intelligence should be appreciated and fostered, more jobs rely on well-developed linguistic or logical-mathematical intelligence than on musical or bodily-kinesthetic intelligence (A. Kozulin, personal communication, September 18, 2005). As with past theory on learning styles, there is a risk associated with unexamined application of MI theory. If students become labeled "kinesthetic learners," some teachers may focus on that aspect of intelligence to the detriment of other forms of intelligence that are essential for life success.

Is Intelligence Inborn and Fixed?

We have already discussed the plasticity of human development above; however, it is worth exploring this topic further in the context of intelligence theories. Most cognitive psychologists writing today believe that intelligence is malleable, molded by cultural expectations, experience, and opportunity (Feuerstein, 1980; Gardner, 1999a; Greenfield, 2000; Kozulin & Rand, 2000; Resnick & Resnick, 1992). This means that educational opportunities can build any student's actual intelligence.

The view that intelligence is inborn and fixed rather than mutable can lead to inaccurate perceptions of students' potential for learning and keeps many educators from fostering children's full capabilities. Too often, students get tracked early on the basis of perceived ability and never have opportunities to move into new tracks (Oakes, 1990). Students from poor families and communities, from homes in which English is not the first language, or who belong to an ethnic minority group are often characterized as simply lacking what it takes to learn (Herrnstein & Murray, 1994). But when given opportunities to engage in challenging curriculum later on, students often show that they can perform at high levels (Sheets & Hollins, 1999). To recognize existing student abilities and realize their potential, schools must sustain efforts to develop learning capacities throughout a child's school experience (Ceci, 1996).

Sternberg suggests that common assumptions about cognitive ability development, namely, that intelligence (IQ) scores reflect some largely inborn, relatively fixed ability construct, need to be revised. Instead, he suggests a construct of *developing expertise*. This term captures the idea that expertise is not an end state, but rather a process of continual development (Sternberg, 1998).

G. Resources

Print Resources

Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (2000). *How people learn: Brain, mind, experience and school*. National Research Council. Washington, DC: National Academy Press.
These authors have successfully linked research on learning to classroom practice in an authoritative and readable book. The learning of both children and teachers is addressed, along with relationships between mind and brain, the design of learning environments, and effective teaching in different subject areas.

Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century.* New York: Basic Books.
This is the updated version of Gardner's classic *Frames of Mind* and presents a relatively recent vision of multiple intelligences. Teachers have been inspired by Gardner's theory and its implications for practice. Gardner's writing is accessible and well organized.

Greenfield, P. M., & Cocking, R.R. (Eds.). (1994). *Cross-cultural roots of minority child development*. Hillsdale, NJ: Erlbaum.
This seminal volume contains 19 essays written by researchers in the fields of anthropology, sociology, and cultural psychology that address questions regarding the development and socialization of minority children and the interaction between ancestral cultures and dominant cultures in the United States and other countries. This is an excellent resource for educators who wish to explore the complexities of cognitive socialization of students from many different cultures.

Hirsch-Pasek, K., & Golinkoff, R. M. (2003). *Einstein never used flash cards: How our children really learn—and why they need to play more and memorize less.* New York: Rodale.
Teachers, administrators, parents, child care professionals, and policymakers will all find this book entertaining as well as enlightening. Written by experts with backgrounds in developmental psychology, linguistics, and education, the volume presents practical suggestions based on scientific findings on child development in the areas of number, language, literacy, sense of self, and social intelligence.

Kozulin, A. (1998). *Psychological tools: A sociocultural approach to education*. Cambridge, MA: Harvard University Press.
Kozulin is a Vygotskian scholar who has both written about Vygotsky's theory and conducted research on cognitive development, including a case study of the educational trajectory of Ethiopian immigrants to Israel. He explains how human symbol systems serve as psychological tools for solving problems and explores how learners' ability to use such tools can be expanded through teaching.

Rogoff, B. (2003). *The cultural nature of human development*. Oxford, UK: Oxford University Press.
Rogoff's book takes a Vygotskian perspective on development and uses many examples from her own anthropological research to show how culture and development are intertwined. Rogoff resists categories, yet she shows how patterns appear within groups and are carried across generations. This book is richly illustrated and powerful in the ways it illustrates cultural concepts.

Santrock, J. W. (2002). *Life-span development* (8th ed.). Boston: McGraw Hill.
John Santrock's books on life-span development have been a mainstay of college courses for decades because they provide an excellent survey of the topic of human growth and development in all domains. This book is a basic resource that any educator is likely to find useful over and again.

Zull, J. E. (2002). *The art of changing the brain: Enriching the practice of teaching by exploring the biology of learning*. Sterling, VA: Stylus.
Zull is a biology professor who has written a book specifically for educators. He contends that a more flexible and varied approach to teaching and learning is needed, such as connecting with what learners already know, using the senses in learning, and how feelings are part of the learning process.

Web Sites

The American Psychological Association
http://www.apa.org

This Web site provides information about everything from early childhood development, bullying, kids and the media, race, testing issues to autism spectrum disorders and diversity in psychology.

Serendip
http://serendip.brynmawr.edu

Serendip is forum where educators, neurobiologists (such as Dr. Paul Grobstein, who teaches courses on the brain to groups of educators), computer scientists, business people, and others discuss topics such as brain and behavior, science education, biological diversity. Many articles of interest can be downloaded, and readers can write to the site or post comments to different forums.

The Society for Research in Child Development (SRCD)
http://www.srcd.org

SRCD is a professional organization focused on all aspects of development, including those related to school-based learning. Visitors to the site can order SRCD publications and download summaries of articles. Topics include parent-child socialization among cultures, enhancing children's ability to generalize knowledge, and adolescent coping, for example.



PART II:

Culture, Identity, and Schooling

CULTURE, IDENTITY, AND SCHOOLING

Identity, the sense of who one is, is a complex developmental achievement that can be fostered or squelched by experiences in school. It is a sociocultural construction that has lifelong consequences and is subject to change on the basis of one's experiences in the world. Research suggests that students' ethnic/racial/cultural identities interact with factors in public settings, particularly schools, to shape their academic identity—the sense of themselves as learners and students. For these reasons, we devote a major section of this volume to relations among identity, culture, and schooling.

Identity
The basic sense of who one is, including one's beliefs and values; it entails a conscious or unconscious sense of affiliation with one or more groups, including ethnic, racial, cultural, gender, language, religious, national, regional, and those associated with particular activities (sports, education, the arts, and so forth).

Ethnicity
Identity with a group on the basis of common culture and some combination of ancestry, geography, history, language, religion, and physical characteristics.

Race
Identity with a group on the basis of perceived physical characteristics, such as skin color and facial features; race is a socially constructed category, and recent genomic research finds "no scientific support for the concept that human populations are discrete, non-overlapping entities" (Jorde & Wooding, 2004).

Stereotype
A fixed notion of the characteristics of members of a particular group, without regard for individual differences.

A. Contributors to Identity

In this part, we explore contributors to identity development. We focus on a few key aspects, but there are others that are also important—if not equally so—such as gender, sexual orientation, socioeconomic class, and religion, referred to as *microcultures*.

> ***Microculture***
> A social group that shares certain common attributes and values, such as religion, gender, or sexual orientation; the concept can apply to any social group, including one based on a common profession (e.g., the culture of medicine).

The elements explored here operate in such dynamic relation to each other that to evaluate the contribution of any one of them as isolated variables does not reflect reality (Diamond, Randolph, & Spillane, 2004; Rogoff, 2003). Riger (1995) quotes the poet Audre Lorde as describing herself as "a forty-nine-year-old Black lesbian feminist socialist mother of two, including one boy, and a member of an interracial couple" (p. 149). To try to understand any one aspect of Lorde's identity without regard for the others would be an oversimplification. And Lorde's self-description certainly is a reminder that identity is above all multifaceted and personal.

Third, we are limited by the linear nature of the written English language, which prevents us from expressing too many ideas in a single sentence without it becoming a run-on. Actually, Sign, the language of the deaf and hard of hearing, would probably be more appropriate because it can represent multiple frames of reference simultaneously through the use of space. Fourth, we have used the term *culture* very broadly at times (as in the title of the volume and its sub-sections) to encompass culture, race, ethnicity, and groups of people bound together by the language they use.[7] In fact, many of the distinctions among people's experiences can be characterized as cultural, because culture is involved in every part of life and is what guides one's values and beliefs. However, there are times when race, for example, has to be invoked to understand what is occurring in a social context.

Finally, there is no simple hierarchical mapping of the elements we do focus on. For example, race subsumes several ethnic and cultural groups.[8] But sometimes an ethnic group subsumes several races, languages, and geographic histories. For instance, non-observant Jews often maintain a sense of ethnic identity as Jewish, and they may be of any race and speak virtually any home language. A common native language spoken by peoples from different continents may be a strong factor in identity. Social groups existing within a nation such as the United States may share a common language (English) and aspects of cultural identity but have distinct ethnic identities associated with languages besides English and different histories. A cultural group,

[7] The term *cultural competence*, when applied to teaching, refers to the ability to recognize differences among students and families, respond to those differences positively, and to interact with others in a range of sociocultural environments (Lindsey, Robins, & Terrell, 2003).

[8] *Race* is a social, not biological, category.

like the culture of the deaf (Wilcox, 1989), obviously can subsume people from every race, ethnicity, and way of life. Likewise, certain cultural values that are important for understanding students and their families may form a common denominator across many cultural groups; this is the case with value systems like individualism and collectivism, which we discuss later on.

Two principles can help guide our exploration of not only identity development but also how culture, microcultures, race, and ethnicity interrelate with each other and education: 1) It is more useful to think of patterns of cultural processes, values, and belief systems "located in history and carried forward through institutional practices" (Lee, 2003, p. 3) than categories like race, culture, or ethnicity, to understand how students and families relate to schooling, and 2) at the same time, categorical identities such as culture, race, or ethnicity are often associated with people's experiences in the world, and they may be meaningful to individuals. As social constructs, they have power. So, we are faced with trying to recognize the pitfalls of categorical thinking (stereotyping and oversimplification of people's lives) *and* recognizing how those categories (what Rogoff, 2003, calls "social addresses") are connected to patterns of experience, including school experiences. As Lee (2004) points out, heterogeneous groups like African Americans do have some commonality and continuity over generations in values, belief systems, and patterns of practice. In addition, much of the relevant research uses these constructs.

B. Identity Development

Who am I? Who am I like? Where do I belong? These are questions about identity, and they begin long before a child can consciously pose them. In fact, children begin to develop a sense of identity as individuals and as members of groups from their earliest interactions with others (McAdoo, 1993; Santrock, 2002; Sheets, 1999a). Although adolescence is a defining period of identity consolidation, identity can continue to change throughout life, based on one's emotional and cognitive development in interaction with external circumstances (Branch, 1999; Linger, 2001; Trueba, 2002). Healthy identity formation is a critical element of human development (Branch, 1999; Erikson, 1968; Maslow, 1987; Root, 1999; Sheets, 1999a), and many believe it to be an important factor in school adjustment and achievement (e.g., Branch, 1999; Gay, 1999; Sheets, 1999b). It is a maxim of professional development on cultural awareness that one must explore one's own culture and other aspects of identity before learning about others (Singleton & Linton, in press).

Activity 4: Personal History

(Adapted from Okazawa-Rey, 1998)

Instructions to Participants

Discuss the questions in Figure 4 with members of your group. This activity may generate a lot of feelings for you and others in your group. Please keep all information confidential (within the group) and do not refer to the specifics of what others have said without their permission after the activity. It will be useful to appoint someone as the group's facilitator to make sure everyone has an opportunity to share his or her thoughts.

Figure 4: Your Racial, Ethnic, and Cultural History

1. What is your racial, ethnic, and cultural identity? What other aspects of identity are important to you?
2. What is your earliest recollection of someone being included or excluded from your group based on race, ethnicity, or culture?
3. What is your earliest recollection of being different or excluded based on race or culture? Describe a time when your difference made a difference.

After sharing your histories, analyze your collective experiences; pay particular attention to geography, historical time period, race, class, gender, religion, language, and other factors. Think about the following questions:

4. How did it make you feel to think about and answer the questions?
5. What similarities and differences do you notice in your experiences?
6. What are some of the major forces that have shaped your experiences?
7. How have oppression, discrimination, and prejudice affected your lives?
8. When were you placed at a disadvantage because of your group membership?
9. If your lives were not noticeably affected by discrimination and prejudice, why might this be?
10. When might you have had an advantage because of your group membership?
11. In the United States, what difference does color or race make? Ethnicity? Language background?

Think about the role schools played in the dynamics of oppression when you were a young person.

12. Can you think of policies or practices that have negative consequences for members of a particular group?

13. How did other institutions support what happened in schools?

14. What strategies did communities, families, and individuals use to resist discrimination and organize on their own behalf?

Reflect on how your personal experiences with culture and difference have shaped your conception of yourself as a professional.

15. How might a person's cultural and racial experiences influence his or her career path?

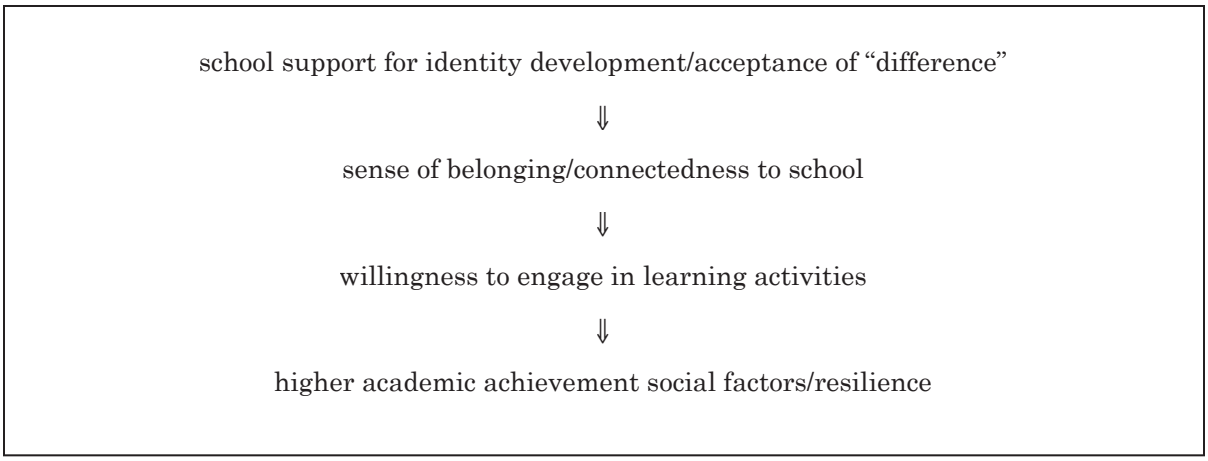
16. Share some of the ways in which your experiences with culture and difference influenced your career choice.

17. How have these experiences shaped your views of students who are from racial and cultural groups different from your own?

Students need to feel that they can be themselves and be accepted in the classroom and school. Part of acceptance is, certainly, that their identities are respected. Research shows that when students feel that they belong in the classroom, they are more likely to participate in learning activities (Osterman, 2000). It is not surprising that sense of belonging is also associated with higher academic performance (Barber & Olsen, 1997; Eccles, Early, Frasier, Belansky, & McCarthy, 1997; Solomon, Watson, Battistich, Schaps, & Delucchi, 1996). Conversely, lack of feeling of acceptance is associated with behavioral problems, lower achievement, and dropout status (Osterman, 2000).

Not surprising, but very disturbing, is the fact that the incidence of a *low sense of belonging* in one's school is systematically higher in schools whose populations are predominantly from non-dominant racial and ethnic groups (Osterman, 2000). In other words, such students may not even feel a sense of belonging in schools where they constitute most of the population. Figure 5 below is intended to suggest how school support for identity development can trigger a cascade of positive responses within the student. Bear in mind that identity develops in a larger context than just school and family and that this model is vastly oversimplified. Nevertheless, it captures visually some of the proposed relationships we have been talking about.

Figure 5: Identity, School Belonging, and Achievement Relations



Identity is shaped from within and without, that is, it is both "self-given and other-ascribed" (Sheets, 1999a, p. 94). A person may identify as "Indio" (Indian) in one setting, such as the Dominican Republic, only to find that the outside world identifies her as Black or African American when she moves to New York City (Navarro, 2003). With changes in social circumstances, such as emigration from one country to another, tensions between internal and external identities can ensue. The new society into which immigrants emerge may "colorize" them, as with Mestizos (of mixed European and Indigenous ancestry) from Latin America who have previously perceived themselves as White (Arriaza, 2004). Or, it may lump them in with other cultural and ethnic groups whom they perceive to be quite different, as when Japanese-, Chinese-, Vietnamese-, Hmong-, and Thai-Americans are classified on census forms as Asian (Lee, 1999). Sometimes Asian students are seen through "a 'foreign' or 'other' non-western lens" (Adler, 2004, p. 73). Such a stance is far from accepting and can only contribute to an environment in which such students feel as though they are "the other" and do not belong.

Culture, Language, Race, and Ethnicity in Identity

Dominant Culture
The culture whose values, beliefs, and language hold the most power in a society.

In the first section of this volume, we focused on culture as a source of variation in approaches to child rearing, development, and learning. Our emphasis was on the values underlying people's cognitive and symbolic orientation to the world. Ongoing participation in the practices of a cultural community[9] from early childhood as part of a family is, arguably, the foundation for one's identity. It is in this group that one first notices others whom one "perceives to be similar, wishes

[9] Rogoff (2003) defines a community as a group of people "who have some common and continuing organization, values, understanding, history, and practices" (p. 80).

to be like, or wishes to impress" (Goodnow, 1987, p. 18, cited in Litowitz, 1997, p. 475). In other words, it is within this group that the child first forms ideas of who he is in relation to others. Depending upon whether there is talk within the family and community about culture, race, or ethnicity, a child in primary school may know about group traditions and language styles but not necessarily label herself as Chinese or African American (Lee, 1999).

One cultural resource that plays a key role in identity is the language or dialect of a group. According to linguist Teresa McCarty (2002), an overriding concern among Native North American communities is maintaining their languages. For groups such as the Pueblo nations and others, who have very few young speakers to perpetuate their languages, "language loss sums up the struggle to protect Indigenous identities, lifeways, and rights" (p. 15). In fact, we have discussed linguistic identity in the Language volume and stressed its meaning for individuals and groups.

Linguistic identity is tied to ethnic and racial identity. For example, many African Americans embrace what is variously referred to as Ebonics, Black Language, or African American Vernacular Dialect because it is part of their culture—the language they have learned in the bosom of family and through which they are most able to express their deepest thoughts and feelings. Speakers of the dominant dialect of English may at the same time cast aspersions on what they take to be an inferior form of English, though linguists do not agree with this assessment (see, e.g., Wolfram, Adger, & Christian, 1999). Such judgments, coupled with expectations to learn and speak the dominant dialect of English, assail the healthy identity development of African American children and youth as much as demands to "act White" in other ways.

What is race? Geneticists have traditionally said there is no biological justification for the classification. There are no discrete biological racial groups; rather, there is a continuum of characteristics that are manifested to greater or lesser degree in people (Lewontin, Rose, & Kamin, 1984). Where one draws the line between one race and the next is arbitrary, not scientific. In fact, race is a social category, defined by society (Mukhopadhyay & Henze, 2003). At the same time, it must be acknowledged that recent gene research has shown that there are a small number of genetic "families" that are linked to major geographic regions (Africa, Europe, Asia, Oceania, and the Americas) and correspond to the traditionally defined major racial groups (Rosenberg et al., 2002). Nevertheless, grouping people according to race is a major oversimplification of both social and biological reality (Bamshad & Olson, 2003; Jorde & Wooding, 2004).

The social (versus genetic) identification of a person's race is commonly based on phenotypic characteristics, that is, physical features, whereas ethnicity is more associated with common historical and cultural heritage (Branch, 1999). Some use the term racenicity to signify the ways in which these aspects of identity can be enmeshed (Leistyna, 1998). Whites can be ethnically Italian, Armenian, or Serbian, for example. Blacks can identify as West Indian, Cuban, Haitian, or African American. Others (e.g., Wallace, 2004) use the term ethno-racial as a more general term to refer to both racial and ethnic groups.

Researchers and theorists believe it is important to recognize race as a separate construct contributing to identity and people's experiences within social context (e.g., Branch, 1999; Sheets, 1999a). Racial experience is shaped by the history of the Unites States, not only vis-à-vis African Americans and European Americans (Blacks and Whites, to use the racial terms), but also Mexican Americans, others who have been called Hispanic or Latino, and Portuguese-speaking

Brazilians (Browns); American Indians (Reds); and Asians (Yellows). These terms may sound offensive, but the fact is that U.S. society does racialize people, largely on the basis of color. It makes race a salient characteristic that is often associated with differential treatment.

Individuals may tire of being racialized. "Not all Black people place race and Black culture at the center of their identity" (Cross & Fhagen-Smith, 1999, p.29), but others may see them primarily in those terms. Lee (2003) believes that racial categorization by the government or others serves no purpose. She argues that ethnic or cultural group affiliation is more important because it is through routine sociocultural practices that one comes to define oneself. McLoyd (2004) makes the same point.

Ethnic identity entails an awareness of one's membership in a social group that has a common culture and often a shared language, history, geography, religion, and physical characteristics (Fishman, 1989; Sheets, 1999a). Not all of these aspects need to be shared, however, for people to psychologically identify with a particular ethnic group. As noted, Jews can be of any race and have widely divergent languages and national affiliations. Some Jews are not religious, but due in part to the Holocaust, their Jewish identity is still "seared in their hearts" (Takaki, 1993, p. 310).

White Americans of European ancestry may not have a strong conscious cultural, ethnic, or racial identity (Richardson & Silvestri, 1999; Tatum, 1997). By virtue of being among the dominant group, they are not forced to become culturally aware and evaluate their own thought and behavior. Western European culture is the basis of the dominant U.S. culture, and this group has the "ability to display their ethnic identity as the norm in school settings. Conversely, students from ethnic groups of color have had to construct, maintain, and develop their ethnic identities in situational contexts [like school] that often require them to restrict or suppress the natural display of internal ethnic behaviors" (Sheets, 1999a, p. 97). According to Tatum (1992) and others (Derman-Sparks & Phillips, 1997; Singleton & Linton, in press), White educators and students can benefit from exploring their own racial experience and coming to see that they, too, are racial beings. Only then can they take a constructive role in preventing racism in schools and society.

With all of the pressures to conform to a set of dominant culture norms, students from non-dominant cultural, ethnic, and racial groups respond in a range of ways. Some students accommodate the demands of the dominant culture environment and do well in school, but in the process they may feel they are forced to become "raceless" (Fordham, 1988) or "act White," denying their true identity (Oakes, Wells, Jones, & Datnow, 1997). Some African American students have been said to form an "oppositional identity" (Fordham & Ogbu, 1986), meaning that they refuse to embrace values and behaviors associated with Whites in order to do well in school. They may simply reject the goal of academic achievement.[10] Hilliard (2003) points out that this purported oppositional identity development does not take place in all settings and that how a school approaches African students (Hilliard's term) has a huge influence over students' participation. Even in suburban settings where African Americans are middle class, some do disengage from the learning process to a degree and do less well than they might (Ogbu, 2003). Steele and Aronson (1995) suggest on the basis of their observations of students at Stanford University that many African Americans have internalized the low expectations that abound in the society at large and achieve less than they are really capable of. They may say, "Well, I got a B+, and that's pretty good, considering…"

[10] The research also showed, however, that males and females had different patterns of behavior; females did not apparently feel so conflicted about high academic aspirations.

Bicultural, Panethnic, and Mixed-Heritage Identity

Pressures for immigrants and people from non-dominant cultural/ethnic/racial groups to assimilate to dominant culture ways of thinking, speaking, and doing are often rationalized on the grounds that it is too difficult to straddle two cultures: One has to make a choice (Phinney & Devich-Navarro, 1997), and life will then be easier. However, research points to quite an opposite conclusion (Phinney & Devich-Navarro, 1997; Trueba, 2002). In fact, many people do find ways to retain their cultural traditions *and* establish relations with the larger society (Berry, 1990, cited in Phinney & Devich-Navarro, 1997; Greenfield & Cocking, 1994). Phinney and Devich-Navarro conducted an in-depth study of middle- and working-class Mexican American and African American high school students and found that 83% of the African Americans and 98% of the Mexican Americans identified with both (dominant) American culture and their own ethnic/racial culture.[11] Some functioned as what the researchers called "blended biculturals," integrating elements of both cultures/ethnicities/races in their daily lives and expressing pride in both.

Other adolescents were better described as "alternating biculturals," who found that sometimes they identified with American values and behaviors and at other times with the values and behaviors associated with their ethnic group. The third group, students who were described by Phinney and Devich-Navarro (1997) as "separated biculturals," did not feel part of the larger society. Such a student might say, "I'm not part of two cultures. I am just Black" (p. 24). In fact, these students were not bicultural at all, according to them. Fellow students in the study said that separated bicultural students put pressure on them to choose one or the other identity. It is interesting that none of the 98 students in the study claimed an American identity to the exclusion of their ethnic identity. Ethnic/racial identity is apparently not a choice for students from non-dominant groups. Moreover, bicultural identity is not always easy to forge, and there may be great ambivalence about attempting to do so. After all, 17% of the African American students (9 out of 52) in Phinney and Devich-Navarro's study did not describe themselves as bicultural.

Another term that has been used to describe the outcome of negotiating two or more cultural identities has been "hybrid identity" (Suárez-Orozco, 1998). A new identity emerges that integrates connections and adaptive behaviors associated with both the home and dominant culture. Asian immigrant or first-generation students (a very diverse group, indeed) may have difficulty negotiating a new bicultural or hybrid identity. Despite the diversity among Asian groups, they do have some values in common that affect their adjustment to dominant U.S. culture. According to Sue and Sue (1990), "Although the Asian immigrants and refugees form very diverse groups, there are certain areas of commonality such as deference to authority, emotional restraint, specified role and hierarchical family structure and…extended family orientation (p. 197, cited in Lee, 1999, p. 111). These values can come into conflict with dominant culture values of independence and self-expression when children attempt to acculturate, and parents begin to lose ground in socializing them.

Often the larger society assigns a "panethnic" identity to Asian students, overlooking the distinctions among Asian ethnic groups and incorporating these various groups within the single term "Asian." Some children and adolescents develop both a panethnic (Asian) and an individual ethnic (e.g., Korean) sense of who they are, embracing aspects of dominant U.S. culture. Espiritu

[11] Phinney and Devich-Navarro seem to collapse the constructs of race, ethnicity, and culture.

(1992) writes that the origins of Asians' sense of panethnicity were not cultural but, rather, political: "Asian Americans came together because they recognized that pan-Asian alliance was important, even essential, for the protection and advancement of their interests" (p. 164).

Wallace (2004) has studied the experiences and identity development of mixed heritage students, who are increasing in number, according to Census statistics (Lopez, 2003). Students interviewed by Wallace, who identified themselves as from a wide range of ethnic and racial backgrounds, often explained that they were invisible in both their racialized communities (that is, those that the society at large identifies as ethnic or non-White) and within the mainstream community. In other words, they were recognized as neither Iranian nor European American, neither Mexican American nor Italian, neither Black nor white, and so on. Because of the tacit "one-drop" rule within the dominant culture, those who were of mixed heritage were not regarded as White. By the same token, some students were rejected by their non-dominant peers because they were too White-looking or were not readily identifiable as "Chinese" or "Latina." A student who identified as both Black and White might feel unnatural pressure to "talk Black" to fit in with her Black friends, yet the same student might "also be relegated initially to outsider status within the mainstream because of the restrictive standards governing Whiteness" (Wallace, 2004, p. 204).

When mixed heritage students' parents provide opportunities at home to participate in sociocultural practices from one or more cultures, they can help their children develop a healthy identity. Wallace cautions that "heritage" does not automatically translate to identity. For example, Yvonne Garcia whose father was Mexican American and mother Japanese American, came to identify more strongly with the Mexican American part of her ancestry because her mother "really took on the Mexican culture… more so than even her culture that she grew up with" (Wallace, 2004, p. 207). However, it is clear that the messages students receive from outside the home can affect the process; it is often through the stares, questions, and comments of outsiders that children discover that their families are considered "unusual."

One finding of Wallace's study (2004) was that no matter what the degree of ethnic identification with their heritage communities was, there was a "universal, unwavering pride expressed by all in their 'mixed' or biracial and biethnic parentage" (p. 208). This was the case across the board, despite great differences in how families oriented their children to their different heritages.

Activity 5: Tensions in Identity

Instructions to Participants

Read the vignette in Figure 6 and review the discussion questions at the end to guide your thinking. Discuss your thoughts about the vignette and responses to the questions with another participant (or in a small group). Jointly identify three observations you would like to share with the whole group as part of a larger discussion.

Figure 6: Korean and Panethnic Identity

Young, a Korean American high school student who identifies herself as both Korean and Asian American, embraced panethnicity after a personal encounter with racism. Her story illustrates the way racism can motivate an identity transformation.

I used to think I was White. I wanted to be White. This was when I lived I a small town. No one discriminated against me there—not in an overt way. I had White friends. Then in fourth grade, I moved here. I saw that Asians were treated like the scum of the earth. I thought that wasn't going to happen to me. I don't have an accent. I have White friends. But I walked around and people called me chink. They called me chink to my face. (Lee, 1996, p.110)

Initially, Young attempted to reject her ethnic identity. In fact, she asserts that she wanted to be White. She assumed that other Asian Americans were discriminated against because they were culturally different (for example, spoke with an accent). After her own experiences with racism, however, Young began to believe that, regardless of how she acted, non-Asians would always see her as Asian. Her personal experiences led her to embrace her Korean identity and to embrace a panethnic identity as an Asian American. For Young, cultural aspects of her ethnic identity were secondary to the social and political aspects of her identity…. [Young's experience illustrates that] [i]ssues of race and power are central to the ethnic and racial identities of Asian American students. (Lee, 1999, p. 117)

Discussion

- **Did anything surprise you about Young's experience? If so, what? If not, why not?**
- **Is there anything in your own experience or in the experience of a student you know that parallels Young's experience?**
- **How might Young's identity struggles affect her classroom behavior?**
- **What can a teacher or other school personnel do to influence the experiences of students like Young?**

Historical Power Relations Reflected in the Present Day

Cultural differences and the failure of schools to respond to them effectively cannot be the only reason students from some non-dominant groups do not achieve to their potential (Hilliard, 2003; Perry, 2003), nor can poverty or the *culture of poverty (Lewis, 1965)*, which is sometimes invoked, be a satisfactory answer. "While minority status and poverty often intertwine, they are by no means synonymous" (Boethel, 2003, p. 12), and there are clearly other factors we must acknowledge. Trumbull, Greenfield, and Quiroz, (2003), Bartolomé (1995), and Suárez-Orozco (1995) draw our attention to another key variable in students' development, learning, and schooling: the historical power relationships between dominant and non-dominant cultural groups. In fact, the social and political power or status of different groups in relation to each other has influenced how they function in society today.

Teachers will understand their students and students' families better when they have a historical perspective on the experiences of different groups within the larger society. A parent's ideas of what to expect in a parent-teacher conference are likely shaped not only by her culture and school experiences but indirectly by the degree of empowerment her sociocultural/racial/ethnic group has experienced vis-à-vis the dominant culture in the current and past generations.

Some educators have looked to sociological theory to understand the current status of non-dominant groups within U.S. society. Sociologist John Ogbu (1994) is well known for his constructs of *voluntary* and *involuntary* minority groups[12], which are said to function differently within the larger society. Whereas all "minorities" suffer discrimination, voluntary minorities (immigrants) tolerate the discrimination better because they are comparing their new lives in the United States to their lives in the countries they left—lives that were undoubtedly more troubled. Hence, they do not compare their treatment or success to White European Americans but to their previous situations. Involuntary minorities are groups that have been colonized (American Indians and Mexican Americans living in what is now Arizona, Texas, and California) or enslaved (African Americans).

[12] When talking about Ogbu's theory, we use his terminology.

Involuntary minority groups have had lower status within the society, have no homeland to return to, compare themselves with White European Americans—and are consequently more disaffected and alienated from the larger society (see Perry, 2003, for a clear and brief explanation of Ogbu's theory, as well as a critique). Suárez-Orozco describes such groups as having "found themselves in a subordinate position of power vis-à-vis a dominant Euro-American majority that not only exploited them economically but disparaged them psychologically and culturally as inferior, violent, and lazy" (1998, p. 415). This is strong language, but it is difficult to argue with.

It is this relationship between the dominant group and involuntary minority groups that ostensibly leads to an oppositional identity among some students: They distrust the dominant culture and do not want to be like its members, even if that is necessary to succeed in school (Fordham, 1988). However, as Hilliard (2003) and Perry (2003) point out, oppositional identity does not seem to appear in school settings where students are respected and challenged.

Suárez-Orozco (1998) writes about the experiences of Mexican immigrants for whom the U.S. states that border Mexico were historically part of their own country. The "psychological disparagement" (p. 415) he mentions (crediting the term to De Vos, 1997) entails not only negative judgments about Mexicans but also pressures to Americanize, placing them in a double bind. They are expected to give up important aspects of their cultural identity, yet they are not respected within the society they are expected to join. One example of public attitudes toward Mexican immigrants is the spate of laws passed in California over the past 10 years, ranging from one limiting social services available to undocumented families to another dismantling bilingual education, which was largely Spanish-English.

All current theories of development, learning, and education acknowledge that the historical dimension must be recognized as having an impact on the present. Not only are values and practices carried across generations, but contemporary human relations are also affected by the histories of different groups of people. As much as some people take the position, "This [whatever form of oppression] is all in the past. We need to get beyond it," the past exerts an influence over the present. We are all the culmination of past events, whether biological, social, political, or cultural. The memories of past injustices are communicated across generations. There are living Americans whose great-grandparents were slaves and others whose parents (or they themselves) were removed from their home communities to attend boarding schools where they would be Americanized and denied use of their native languages.

Agency
The ability to exert power.

Resistance
Actively opposing something, such as attempts by one group to control or dominate another.

Resilience
The internal strength, supported by external supports, to respond flexibly and adaptively to life stresses.

One risk of buying into the voluntary/involuntary minority framework is overlooking the *agency, resistance,* and *resilience* of members of disparaged groups (Kana'iaupuni, 2005). These terms refer to the internal and cultural strengths people and groups have drawn upon to maintain their dignity, persevere in the face of social adversity, and gain rights and access to society's benefits. American Indians, whose population was decimated during the colonial period, have maintained identities, cultures, and—in some cases—even their languages, which they were forbidden to speak by U.S. policy for long periods of time (McCarty, 2002; Reyhner, Cantoni, St. Clair, & Yazzie, 1999; Reyhner & Eder, 1992; Suina & Smolkin, 1994). In addition, a great many persevered through the process of "Anglo" schooling that did "violence to their bodies and psyches." Navajo elder Fred Bia says of his school experience, "[Though it was] not the proper way to educate *anybody*, …[it] made me strong to a lot of things" (McCarty, 2002, p. 46).

Perry (2003) and Hilliard (2003) point to the tenacity of African Americans in seeking educational opportunities and cite a history of academic tradition among African Americans that has, no doubt, allowed them to do as well as they have. Perry says, "[It] is the operative philosophy of schooling that has historically, over time…supported the development and sustenance of effort optimism among African Americans as a historically oppressed group: education for freedom, racial uplift, citizenship and leadership" (Perry, 2003, p. 63). Of course, to seek literacy in the time of slavery was a powerful act of resistance on the part of African Americans, for whom it was forbidden.

This philosophy is captured in the *Autobiography of Malcolm X,* in the slave narratives, in the graduation scene in Maya Angelou's *I Know Why the Caged Bird* Sings, in the African American narrative tradition, and in the history of Black education (Perry, 2003, p. 63). Both Perry and Hilliard cite numerous instances in which African American students in inner city or poor rural settings have achieved to very high standards, not always with the benefit of teachers from their own cultural group. Perry observes that both sociopolitical (power) issues and cultural issues have affected school outcomes for African American students. African American culture tends to be denigrated rather than appreciated and capitalized on in schools.

Academic Identity

It has been shown that an aspect of identity that influences students' school success is how they see themselves in relation to the academic disciplines, their *academic identity* (Nasir & Saxe, 2003). For example, according to Cobb (2004), mathematics serves as a powerful filter in the classroom. Most likely because of the way it is taught, many students "do not continue to study mathematics because they experience a conflict between who they view themselves to be and who they want to become on the one hand, and who they are expected to become in their mathematics classes on the other" (p. 333). Studies conducted in various cultural settings have shown that students may have considerable mathematical skill in one context (e.g., their own communities) and not in another (the classroom) (Carraher, Carraher, & Schliemann, 1987; Saxe, 1988).

Considerable research has shown that students from nondominant racial and ethnic groups (as well as females) often find it difficult to maintain their personal identities and buy into the kind of identity demanded for being a successful mathematics student or pursuing a career that depends on high-level mathematics (American Association of University Women Educational Foundation, 1992; Brody et al., 2000). Students may say to themselves, "I just can't picture

myself acting like that," or, "If that's what it takes to do well in math, I don't need it." One problem identified by American Indian educators is that when mathematics and science are taught without regard for their social and environmental meaning, they are less meaningful to Indian students (Trumbull, Nelson-Barber, & Mitchell, 2003).

One can see the links between academic identity and an environment that allows students to be themselves and not have to become like their dominant culture peers. In addition, an absolutely critical factor in a healthy academic identity is the expectations the school and their teachers hold for students. In the face of a larger society that still holds beliefs about the intellectual inferiority of certain ethnic and racial groups, this is a clear challenge. We address the topic further in the section on "high expectations."

What Schools Can Do to Foster Positive Identity Development

According to Branch (1999), racial attitudes are fairly fluid until late childhood. Because of this, teachers have the opportunity to help shape identity development in part by promoting equal interactions among children of different racial groups (pp. 24–25). Cohen and Lotan (1994) have demonstrated that cooperative learning groups organized in particular ways (with teacher monitoring and intervention) can support students from different racial and ethnic backgrounds to achieve more equal status in the classroom and to see each other in a positive light.

Cooperative learning groups can help all students to develop a healthy academic identity that is a view of themselves as academically capable. One strategy researched by Cohen and Lotan is to identify individual student strengths and provide opportunities for students to demonstrate those strengths through the different roles they take in a cooperative learning group. Part of the teacher's role is to monitor the social interactions in the cooperative groups and intervene from time to time by making explicit observations about what each student is contributing to the group. Cooperative groups can work together on projects of mutual interest, particularly at the secondary level; students who share interests based in part on their racial, cultural, or ethnic backgrounds may be motivated to work hard when they can collaborate on topics they themselves identify as important.

Activity 6: Supporting Students' Ethnic and Academic Identity in School

Instructions to Participants

Read the vignette in Figure 7. Think about the discussion questions and be prepared to discuss your thoughts in the group.

Figure 7: Promoting Participation Through Personal Exploration

Dr. Rosa Hernandez Sheets, a staff member at an urban high school in the Northwest part of the United States, conducted a research project with 27 freshmen who were not performing well in school. She placed these students in a class—a 2-hour language/social studies block—in which they could express their ethnic and cultural identities and develop friendships that would support their academic development. These students, who were Asian (6), African American (10), biracial (6), and European American (5), were allowed to work individually or together in groups of their choosing and could pursue literature and research topics of interest to them. The teacher worked to promote a classroom climate in which students could hold open discussions related to their cultural values. Less emphasis was placed on curriculum and more was placed on strong student participation and positive development of ethnic identity. As a result of this project, the following occurred:

- Students spoke freely about their personal experiences with race, culture, and ethnicity.
- Students chose a range of research topics linked to their own social needs and culture-based knowledge.
- Students worked together in same ethnic/racial groups most often (with the biracial students splitting between Asian and African American groups, based on their non-white parent) and produced research reports that were accepted for presentation at the following year's National Association for Multicultural Education.
- Nine of 27 students earned honors credit on their academic transcript.
- Most received an "A" as a grade in the course.
- Students' academic success did not transfer to their other classes. In those classes, students had significant numbers of disciplinary incidents, high levels of absenteeism, and low academic performance.

Discussion

- **What are your first thoughts about this scenario?**
- **Why do you think students' success in Dr. Sheets's class did not transfer to their other classes?**
- **Consider how student identity affects educational success. What might this say about the usual attribution of school failure to low basic skills, home problems, and poverty?**
- **How can teachers make room in classrooms for students to engage in this kind of personal identity construction?**
- **Why is it important to understand the development and impact of student identity in order to be a good teacher? How will does it affect your teaching?**

Wallace says, "Schools can be key sites where mixed heritage students have extended opportunities to learn about race, mixed race, and the norms of ethnic group participation" (2004, p. 209). Surely, her statement is true of students from all backgrounds. White students may not develop self-awareness without sometimes being in the minority in a group, a situation that can support empathy and understanding of non-White peers. A study by Perry (2002) demonstrated that White students who were in a mixed environment gained greater awareness of what it means to be Black and became more supportive of affirmative action and anti-racist behavior. Whereas conversations about race or explicit study of race are often avoided because of their potentially emotional content, it is only when they take place that there are opportunities to understand the perspectives and experiences of others (Pollock, 2001; Singleton & Linton, in press). The same goes for teachers and administrators.

Belonging, Motivation, and Achievement

There are links among the ability to be oneself (have one's identity fostered and accepted), a sense of belonging at school, and motivation to achieve. Other constructs, such as *acceptance* and *connectedness* overlap with *belonging* in meaning. For example, the term connectedness has been used to refer to students' "perception of safety, belonging, respect and feeling cared for at school" (Battistich, 2001; McNeely, 2003, p. 1, citing work of Resnick et al., 1997). Because terms are not always defined in the same ways, it is difficult to synthesize results of related research; however, our sense is that many different strands of research point to the importance of students' feeling accepted, cared for, and connected to their schools—and it is likely even more important for students from non-dominant cultural groups. Research on Mexican American students (Valenzuela, 1999) and Puerto Rican American students (Nieto, 1996), for instance, has clearly shown how important caring teachers are to students from such backgrounds.

The relationships among belonging, motivation, and achievement are especially germane to the topic of meeting the needs of students from non-dominant cultural, ethnic, and racial groups. As mentioned earlier, research has shown a relationship between students' sense of belonging in the classroom, their willingness to become engaged in learning and participate in classroom activities (motivation), and their academic achievement. Resnick et al. (1997) found that connectedness to school was the only school protective factor (of factors studied) related to all eight different health risk outcomes identified for their study, such as those related to sexuality, tobacco use, and substance abuse.

Motivation can be thought of a student's inclination to engage in a particular action, whether because the act of doing so is rewarding in itself (intrinsically motivating) or because one will receive an external reward such as a grade or positive response from others (extrinsically motivating). There is no simple formula for determining whether something will be intrinsically motivating or whether a person is more likely to engage in a task if he is given an extrinsic reward (Cameron & Pierce, 1996; Hidi & Harackiewicz, 2000), however, there is wide agreement that extrinsic rewards that interfere with the individual's sense of autonomy or control tend to backfire (Deci, Koestner, & Ryan, 1999). (This conclusion is compatible with observations made earlier in the section on the neurosciences.)

One approach to understanding how motivation works is in terms of the goals students are trying to achieve (Covington, 2000). Does the student have a goal of mastering a skill or domain of knowledge (a mastery goal)? Does the student have a goal of doing better than her peers (a performance goal)? Does the student have a goal of being a good member of the group by helping everyone succeed at a task (a prosocial goal)? Only recently have goal theorists begun to examine sociocultural variation in achievement motivation. According to Kaplan and Maehr (1999a), the relative emphasis that the school places on mastery or task goals (focused on learning) versus performance goals (focused on performing) is a characteristic of learning environments that may affect students differently. African American students have been shown to do better when mastery is emphasized over performance (Kaplan & Maehr, 1999b). In addition, because of a communal orientation that runs deeply in African American culture, it makes sense that a less competitive model of education would be more successful (Boykin & Bailey, 2000; Ladson-Billings, 1994; Nelson-LeGall & Resnick, 1998).

Another strand of motivation theory and research is concerned with students' interests. Interest may be *individual*, reflecting an ongoing disposition to learn about some topic or develop a skill that gives one satisfaction or it may be *situational*—stimulated by something one is exposed to through school or other circumstances (Hidi & Harackiewicz, 2000). "[C]hildren as well as adults who are interested in particular activities or topics pay close attention, persist for longer periods of time, learn more and enjoy their involvement to a greater degree than individuals without such interest" (p. 153). It seems that goals and interests interact with each other (as well as other factors) in complex ways to influence student learning.

Recently, theorists have begun to explore how racial, cultural and social differences among students might affect their motivation (Cokley, 2003; Graham, 1994; Henderlong & Lepper, 2002; Rothstein-Fisch & Trumbull, 2005; Urdan & Maehr, 1995). Some of the conclusions researchers have reached are:

1. Motivation to achieve in school is influenced by one's sense of belonging in the classroom (Osterman, 2000; Solomon et al., 1996). Students do best when they feel part of a community.
2. A disproportionate number of students from non-dominant cultural, racial, and ethnic groups do not feel a sense of belonging in the classroom (Osterman, 2000).
3. Many students from non-dominant cultural, racial, and ethnic groups feel pressure to adopt behaviors at odds with their identity. These pressures come from peers as well as the culture of the school (Fordham, 1988; Phinney & Devich-Navarro, 1997; Wallace, 2004) and can jeopardize students' sense of belonging.
4. There are ways of making space for students from a mix of backgrounds to develop a healthy identity and sense of belonging in the school (Sheets, 1999b).
5. Not all students have the same achievement goals. Some are more focused on individual achievement; others are more motivated to contribute to the success of the group. Harmonizing instructional practice with students' goals can improve achievement (Rothstein-Fisch & Trumbull, 2005; Urdan & Maehr, 1995).
6. Providing opportunities for choice can build on students' interests and increase motivation to engage in academic tasks (Sheets, 1999b; Trumbull, Diaz-Meza, & Hasan, in press).
7. There are cultural differences in beliefs about what it takes to achieve. Some emphasize effort, while others emphasize inherent abilities (Henderlong & Lepper, 2002). Understanding students' and parents' beliefs can help teachers work with students more successfully.
8. Extrinsic motivators such as praise and grades function differently for different students, in part because of the cultural values and beliefs of students. Students from cultures where too much praise is thought to damage character may be very uncomfortable with being praised in the classroom, particularly in front of others (Henderlong & Lepper, 2002; Nelson-Barber & Dull, 1998).
9. Lowered academic self-concept of some students may be due to external and not internal factors; when students have not had access to excellent education, they may feel ill prepared for the next step, for example, moving from secondary to post-secondary education (Cokley, 2003).

These observations highlight the complexity of achievement motivation. They also point to the risks of generalizations about why students behave as they do. It is all too easy to come to a logical conclusion that is not the only one that could be justified by the facts. For instance, Cokley (2003) takes issue with the contention that African American students are anti-intellectual and see learning for the sake of learning as "acting White" (p. 525, in response to McWhorter, 2000, and others). He reviews Graham's (1997) study of 300 African American adolescents in an all-African American school in which she asked students "to nominate the students they most admired, respected, and wanted to be like" (Cokley, p. 527). Then she asked them to name three students who "1) work hard and get good grades, 2) 'goof off' and don't get good grades, 3) follow

school rules, and 4) don't follow school rules" (Cokley, p. 527). Graham then compared the lists. The girls tended to admire, respect, and want to be like hard-working students who got good grades, while the boys were less likely to do so. Graham interpreted the boys' response not as an aversion to acting White but as reflecting their taking a "cool pose" (Majors & Billson, 1992, cited in Cokley, p. 527) in order to "protect their self-esteem from academic challenges and perceptions of discrimination" (Cokley, p. 527).

Cokley (2001) suggests, "As Black male students become increasingly disenchanted and disengaged from the educational process, their racial identity becomes detached from academics and increasingly associated with activities where there are more Black role models and perceived opportunities" (p. 485). Perhaps the girls see more potential opportunities for themselves. In any case, this example shows how research on motivation may lend itself to multiple interpretations.

C. Resources

Print Materials

McCarty, T. L. (2002). *A place to be Navajo*. Mahwah, NJ: Lawrence Erlbaum Associates.
McCarty recounts the nearly forty-year odyssey of the Navajo community of Rough Rock, Arizona to establish its own pre-K–12 school that reflects its cultural values and its goals for children. Richly illustrated with photographs by Fred Bia, the book gives a deep feel for how a people's history and culture are intertwined with their notions of education. For instance, the school's approach to education is described as community-centered, not child-centered. In reading this book, one gets a strong sense of how students' and families' Navajo identity was reflected in the process of designing the school and in its eventual shape.

Perry, T., Steele, C., & Hilliard, A. III. (2003). *Young, gifted, and Black*. Boston: Beacon Press.
This book presents a new perspective on the achievement gap and cites many engaging and powerful examples of many strategies and programs that have been successful for African American students. They suggest that African American students should be judged against and educated to high standards, not just compared to the performance of White students, which is in many respects, mediocre itself.

Sheets, R. H., & Hollins, E. R. (Eds.). (1999). *Racial and ethnic identity in school practices: Aspects of human development*. Mahwah, NJ: Lawrence Erlbaum Associates.
The authors in this book describe theories of ethnic and racial identity development and show how school practices intersect with and influence that development. Sheets' chapter on her own dissertation research is detailed, interesting, and inspiring.

Trueba, H. T. (2002). Multiple ethnic, racial, and cultural identities in action: From marginality to a new cultural capital in modern society. *Journal of Latinos and Education, 1*(1), 7–28.
Trueba presents an analysis of the complex process Latino immigrants go through as they adapt to life in the United States. He illustrates how immigrants use their cultural strengths to make this demanding transition.

Wallace, K. R. (2001). *Relative/outsider: The art and politics of identity among mixed heritage students.* Westport, CT: Greenwood/Ablex.
Wallace explores the ethnoracial identity development in the spheres of home, school, and community of students from mixed backgrounds. She directly quotes students from many different backgrounds, and the reader gains an appreciation of the complexity of identity development for them as well as ideas for how schools can be more responsive.

Web Sites:

The Pacific Educational Group
http://www.pacificeducationalgroup.com

Founded by Glenn Singleton in 1992, the Pacific Educational Group (PEG) offers a range of professional development options related to addressing institutional racism and understanding the relationships among perceptions and treatment of African American and Latino students and achievement outcomes for those students. The Web site describes the programs and has links to other resources. PEG has developed a Student Leadership Institute whose focus is on addressing relations among race, identity, and academic achievement and developing leadership qualities in African American and Latino students.

The National Association for Multicultural Education
http://www.nameorg.org/

NAME has as its mission supporting multicultural education throughout the United States and the world. The website offers some resources to non-members, including abstracts of recent articles in the journal *Multicultural Perspectives.* For a fee, readers can purchase full articles. A review of recent issues reveals many articles on ethnic identity issues in relation to schooling.



PART III:

Culture in Teaching and Learning

CULTURE IN TEACHING AND LEARNING

Culture, in the broadest sense, is evidently a major component of the teaching and learning process in the classroom. In this part, we address more specifically the role of culture in schooling and provide many suggestions for constructive ways that educators can acknowledge and respond to culture. Examining the cultural assumptions underlying curriculum and instruction—why we do things the way we do—should be part of any explorations into culture in the classroom. Clearly, one of the most important products of learning about cultures in the classroom is insight into one's own cultural beliefs and practices.

First, we set the context by looking at how educational philosophy has changed in response to new theories of learning and changes in our society. We then outline principles of learning that are widely accepted by educators (and that are directly related to research on learning, development, and culture already discussed).

We explore culturally responsive pedagogy, citing specific kinds of strategies that have proven successful for engaging students and improving achievement. Closing the achievement gap is a primary goal of much of current educational reform, and we show how new understandings—including approaches to racism—can contribute to that goal. Finally, we explore the topic of how to bring about a positive school culture that supports students, teachers, and all of those who work in the school. Culturally responsive pedagogy is, above all, about providing opportunities to support the *perpetuation* of different cultural ways of engaging with the world, not about the *preservation* of fixed cultures (Kozulin, personal communication, September 18, 2005). As Kozulin (2005) observes, "The criterion of such successful perpetuation is that a majority culture starts looking at its own cultural foundations through the lens of a minority culture" (p. 2).

A. Changes in the Philosophy of Education

The philosophy of education has evolved in conjunction with changes in society and in understanding about learning and development. In the past 50 years, there has been a major shift in the prevailing philosophy of education. We summarize some of the most relevant aspects of this philosophical shift in Table 5 below. Current educational reforms and approaches to teaching diverse populations are situated in this philosophical context. Educational goals have changed dramatically and, along with them, conceptions of who should be educated, how, and for what purposes.

Activity 7: Exploring the Philosophy of Education

Instructions to Participants

Table 5 shows contrasts between the view of education in the Industrial Age and in the current Information Age. Work with a partner or in a small group to identify statements or paragraphs in the two previous sections of this volume that support the current (Information Age) philosophy on each of the six elements (pedagogy, etc.) listed in column 1. Be prepared to share with the group and respond to the discussion questions.

Table 5: Characteristics of Education in the Industrial and Information Ages

	Industrial Age	**Information Age**
PEDAGOGY	Knowledge transmission from expert to learner	Knowledge building
PRIME MODE OF LEARNING	Individual	Collaborative
EDUCATIONAL GOALS	Conceptual grasp for the elite few, basic skills for the many	Conceptual grasp and intentional knowledge building for all; "thinking curriculum" for every student
NATURE OF DIVERSITY	Inherent, categorical (i.e., determined by birth and non-negotiable)	Transactional, historical (i.e., socially negotiated, changing over time)
DEALING WITH DIVERSITY	Selection of elites (ensuring continuing dominant status for dominant social/ethnic/racial groups), relegation of broad population to basics	Development model of lifelong learning for whole population
ANTICIPATED WORKPLACES	Factory-modeled workplaces, vertical bureaucracies	Collaborative learning organizations

Source: Keating, D. P. (1996). Adapted from *Habits of Mind for a Learning Society: Educating for Human Development*. In D. R. Olson & N. Torrance (Eds.). *The Handbook of Education and Human Development*. Oxford, UK: Blackwell Publishers.

Discussion

- **What are the implications of a "knowledge-building" approach to teaching? What would this mean in your own practice?**
- **How could the notions of "thinking curriculum for every student" and "lifelong learning" affect how schooling is organized and carried out?**
- **Why is it important to understand the development and impact of student identity in order to be a good teacher? How could it affect your teaching?**
- **Why is collaboration such a key component of new views of schooling?**
- **What vestiges of Industrial Age thinking do you see in your current teaching setting, other settings you have observed, or in the state or national education agenda?**

B. Principles for Learning and Teaching

In the first section of this volume, we discussed theories of learning, emphasizing cognitive conceptualizations. We also investigated how culture is an integral part of learning and development. In this section, we review what educational psychologists and others directly involved in educational research have to say that can guide the design of curriculum, instruction, and assessment. These principles flow from many disciplines, and there are many connections to what has come earlier in this volume related to human development, learning, cognition, and identity formation. We have presented three sets of principles (one set is called *standards* by the group who created them) because they are all influential and because when considered together they create a more comprehensive guide for educators.

Resnick's Principles of Learning

Under the direction of Dr. Lauren Resnick (1999), the Learning Research and Development Center at the University of Pittsburgh has developed perhaps one of the best known and most widely used sets of principles of learning. These nine principles for *effort-based education* can be applied to all students and learning environments. As usual, however, cultural knowledge is necessary in order to apply them intelligently in specific settings. Resnick uses the term effort-based education to emphasize that students' effort, as opposed to inborn ability, is at the heart of accomplishment and school achievement. As important as Resnick's attention to cognitive development is her attention to the teacher's fostering students' dispositions to learn and develop their own intelligence. She notes that it is easy to teach particular cognitive strategies to students, but if they don't incorporate them in a larger dispositional framework, they will stop using them (Resnick, 1999). Figure 8 lists the principles, along with a brief explanation of each one.

Figure 8: Resnick's Principles of Learning

1. **Organizing for Effort**
   Schooling should be designed with the expectation that, with effort, everyone can learn to high standards. Students should be provided the time and expertise they need to do so.
2. **Clear Expectations**
   Schools need to define what it is they expect students to learn, with clear learning targets at each level (grade or grade cluster).
3. **Fair and Credible Evaluations**
   Assessments should be aligned to curriculum and instruction and be criterion referenced rather than norm referenced. That is, they should be pegged to standards, not scored on the basis of student comparisons.
4. **Recognition of Accomplishments**
   An effort-based school should celebrate students' accomplishments based on established criteria; these accomplishments should be shared with the school-wide community, and students' progress should be recognized, "regardless of their entering abilities" (Resnick, 1999, p. 40).
5. **Academic Rigor in a Thinking Curriculum**
   Thinking and problem solving are the "new basics." But thinking and knowledge need to be learned in tandem: Thinking cannot occur without a solid foundation of knowledge, and inert knowledge without thinking is not meaningful.
6. **Accountable Talk**
   To sustain learning, classroom talk needs to be accountable in the sense that evidence appropriate to each discipline is used (e.g., data in science, documentary sources in history). It should improve students' thinking by supporting their ability to use knowledge and reason.

7. **Socializing Intelligence**
   By this, Resnick means that teaching socializes students to the idea that they can be intelligent, that they will use their mental skills to engage in high-level talk and work.

8. **Self-Management of Learning**
   This principle refers to students' use of metacognitive skills to monitor their learning, use feedback from others to improve their learning, and judge their own progress.

9. **Learning as Apprenticeship**
   Teachers and others can model complex thinking for students through project-based learning and presentations; projects can be interdisciplinary and require and develop knowledge and skills that are intellectual, practical, and social.

These principles reflect contemporary views of intelligence as malleable and improvable through the efforts of both the learner and others who help her learn. They also delineate the conditions under which intelligence and learning can be developed in the classroom. Resnick's vision is of a classroom where standards and performance expectations are high and clear to everyone, the curriculum is challenging and made accessible to everyone, learning is assessed in fair and valid ways, and everyone understands that effort leads to learning and achievement. The teacher in such a classroom can serve as a model for learning and support students' disposition to learn. On the surface, these principles do not appear revolutionary, but they fly in the face of past decades of assumptions about what intelligence is (inborn and fixed) and who can master a high-level curriculum (a select few).

Resnick's principles are based largely in cognitive psychology, without specific mention of taking students' cultures or backgrounds into consideration. The apprenticeship model, however, is usually discussed in a cultural context (see, e.g., Lave & Wenger, 1991; Rogoff, 1990; and our discussion below). For example, we know that principle #4 cannot be applied in a universal manner because of cultural variation in how students receive praise or respond to competition (Cokley, 2003; Henderlong & Lepper, 2002; Rothstein-Fisch & Trumbull, 2005; Urdan & Maehr, 1995). Further, Resnick's principles fail to address the social nature of learning and the benefits of collaboration in the classroom, except in the mention of apprenticeship. They are not incompatible with other principles and inferences about learning to which we have alluded but are useful in combination with what we now know about the interrelationships among culture, race, ethnicity, and other microcultural aspects of identity, human development, learning, and schooling.

More about the Apprenticeship Model

Resnick's ninth principle refers to *apprenticeship*, a model of learning in which inexperienced learners learn alongside experts, using observation and guided practice. Historically, the apprenticeship model has dominated education. It is still a preferred mode in subsistence societies where children learn the practices of their parents, whether weaving (Greenfield, 2000) or sewing by women and girls (Collignon, 1994), fishing by boys and men and preserving food for the winter by the whole community (Lipka et al., 1998), or herding sheep and grinding corn by both boys and girls (McCarty, 2002). This model worked well for the agricultural and other subsistence societies of previous centuries and remains valid today, having been investigated cross-culturally by researchers in recent years (Lave, 1988; Lave & Wenger, 1991; Rogoff, 1990, 2003). Children and young adults tend to learn by the side of their elders by observation rather than face-to-face through language. Current conceptions of effective education incorporate aspects of apprenticeship (e.g., teacher modeling), but face-to-face instruction through language is also vitally important. A math teacher, for example, cannot simply demonstrate the solving of a mathematical equation; he or she must also present to students a theoretical model of problem solving or mathematical reasoning that students can apply in their own work.

Nieto's Principles of Learning

Nieto (1999) has offered her own set of five principles of learning, which are compatible with Resnick's principles but amplify them by adding a sociocultural dimension. Figure 9 lists and explains Nieto's principles. Readers will see that all of these principles are based in a sociocultural constructivist view of learners.

Nieto's perspective clearly situates the learner in a social, cultural, and historical context, a stance compatible with Lerner's (1998). Her fifth principle points to the roles and responsibilities of teachers, which Gay (2000) has outlined in terms of culturally relevant teaching. Citing Diamond and Moore (1995), Gay suggests that teachers should act as cultural organizers, cultural mediators, and orchestrators of social contexts. We summarize her definitions on the following page.

Figure 9: Nieto's Principles of Learning

Cultural Organizer
One who understands how culture operates in the classroom, creates learning environments that reflect cultural and ethnic diversity, and facilitates high performance for all students.

Cultural Mediator
One who facilitates opportunities for students to have critical conversations about cultural conflicts, analyze mainstream cultural ideals and realities and compare them to other cultural ideals and realities, clarify ethnic identities, honor other cultures, develop strong cross-cultural relationships, and combat prejudices of all kinds.

Orchestrator of Social Contexts
One who makes teaching compatible with the sociocultural contexts of students from ethnically diverse populations and helps students adapt their cultural competencies to school learning resources.

CREDE's Five Standards: Moving From Principles to Action

Most teachers would rightly comment that the roles and responsibilities listed above and the principles elucidated by Resnick and Nieto can be difficult to turn into action. The Center for Research on Excellence, Diversity, and Education (CREDE) developed a research-based framework of standards that educators can use as an organizing structure for thinking about how to move from principles to action. CREDE refers to these as standards for effective pedagogy (Tharp, Estrada, Dalton, & Yamauchi, 2000). The five standards are:

1. Joint Productive Activity: Facilitate learning through joint productive activity among teachers and students.
2. Language Development: Develop students' competence in the language and literacy of instruction throughout all instructional activities.
3. Contextualization: Contextualize teaching and curriculum using the experiences and skills of home and community.
4. Challenging Activities: Challenge students towards cognitive complexity.
5. Instructional Conversation: Engage students through dialogue.

CREDE's perspective is based in Vygotsky's theory of how students learn, and their standards are based in considerable research related to effective teaching (summarized in Doherty, Echevarria, Estrada, Goldenberg, Hilberg, Saunders, & Tharp, 2003).

Below we consider each standard, its potential contribution to creating a culturally responsive classroom, and some classroom indicators of the standard.

1. **Joint Productive Activity: Facilitate learning through joint productive activity among teachers and students. (See Table 6).**

The sociocultural view of learning espoused by Vygotsky (1978) and elaborated upon by Chaiklin (2003), Rogoff (2003), Tharp and Gallimore (1988), and others posits that learning occurs when an adult or expert peer assists a learner through his or her ZPD. Learning happens most effectively when the novice and the expert are working together towards a common goal or product that connects schooled or scientific ideas with practical problems.

When joint productive activity occurs, teachers and students create a common context of experience within school, even when they do not share the same home culture. For instance, in the process of making a class book about a field trip to The Desert Zoo, teacher and students can discuss their shared experience, talk about how it may relate to past experience with family in a desert or zoo setting, brainstorm what they think should go in the book, and distribute tasks within small groups. The teacher can help orchestrate completion of the task, engaging students in new language related to the desert ecology and what they observed and helping them monitor their writing. After components of the book are completed, the group can discuss how to integrate them and how to share the book within the class and with other students or their families. Conversation in relation to the shared experience can help students learn relevant communicative and academic language, such as accurate vocabulary, linguistic structures for sequencing events, or simply the language related to making a book.

Table 6: Teacher Indicators of Joint Productive Activity

Plans instructional activities requiring student collaboration in the creation of a joint product.
Matches the demands of joint productive activity with time available for completion.
Arranges seating to accommodate individual and group needs to talk and work together.
Participates with students in joint productive activity.
Organizes students in a variety of groupings based on friendship, mixed academic ability, language, project, and interests, or in any other way that promotes interaction.
Plans with students how to work in groups and how to make transitions from one activity to another, such as from large-group introduction to a small-group activity, from clean up to dismissal, and the like.
Manages student and teacher access to materials and technology to facilitate joint productive activity.
Monitors and supports student collaboration in positive ways.

(Adapted from Center for Research on Excellence, Diversity, and Education, 2002)

2. **Language Development: Develop students' competence in the language and literacy of instruction throughout all instructional activities (see Table 7).**

Everyday social language, formal academic language, and subject matter lexicons (e.g., the vocabulary of mathematics) must all receive explicit attention through purposeful instructional conversations and reading and writing across the curriculum. The language of school is often unfamiliar to English language learners and other students from non-dominant cultural groups (García, 1991; Hart & Risley, 1995; Wong-Fillmore, 1989). Linking students' ways of speaking with classroom instruction and providing explicit instruction in new forms of discourse will support the development of new ways of speaking. For example, a teacher can do a chalkboard or overhead activity that records student language on one side of a chart and scientific language for the same topic on the other side (Trumbull, Diaz-Meza, & Hasan, in press). This example is presented in full in the second volume of this guide.

Table 7: Teacher Indicators of Developing Language Across the Curriculum

Listens to student talk about familiar topics such as home and community.
Responds to students' talk and questions, making "in-flight" changes during conversation that directly relate to students' comments.
Assists written and oral language development through modeling, eliciting, probing, restating, clarifying, questioning, praising, and so forth, in purposeful conversation and writing.
Interacts with students in ways that respect communication styles that differ from the teacher's, such as wait time, eye contact, turn taking, or spotlighting.
Connects student language with literacy and content-area knowledge through speaking, listening, reading, and writing activities.
Encourages students to use content vocabulary to express their understanding.
Provides frequent opportunity for students to interact with each other and the teacher during instructional activities.
Encourages students' use of first and second languages in instructional activities.

(Adapted from Center for Research on Excellence, Diversity, and Education, 2002)

3. **Contextualization: Contextualize teaching and curriculum using the experiences and skills of home and community (see Table 8).**

Teachers must show students how abstract concepts (or schooled concepts) are derived from and can be applied to the everyday world. In order for teachers to fully understand students' experiences and skills, it is necessary to collaborate with students' families and communities. In that way, teachers can learn about family patterns of participation in activities, ways of communicating, family-based knowledge, and interests. Some theorists believe that experience should be drawn upon first and then linked to schooled concepts (Trumbull, Nelson-Barber, & Mitchell, 2002). For example, some teachers in Fairbanks, Alaska have worked with their students to build racks for drying salmon during fishing season (Lipka & Adams, 2004). This is a traditional activity of the Yup'ik culture to which many students have been exposed. Mathematics concepts and procedures are embedded in the activity and then linked to school-based mathematics. This is, of course, also an example of a rich, joint productive activity.

Table 8: Teacher Indicators of Contextualization

Begins activities with what students already know from home, community, and school.
Designs instructional activities that are meaningful to students in terms of local community norms and knowledge.
Acquires knowledge of local norms and knowledge by talking to students and family and community members and by reading pertinent documents.
Helps students connect and apply their learning to home and community.
Plans jointly with students to design community-based learning activities.
Provides opportunities for parents or families to participate in classroom instructional settings.
Varies activities to include students' preferences, from collective and cooperative to individual and competitive.
Varies styles of conversation and participation to include students' cultural preferences, including co-narration, call-and-response, choral, and others.

(Adapted from Center for Research on Excellence, Diversity, and Education, 2002)

4. Challenging Activities: Challenge students towards cognitive complexity (see Table 9).

According to this standard, all students must be provided with cognitively demanding curriculum and with meaningful assessment that allows feedback and responsive assistance. Instruction must be provided that requires higher order thinking. It is often assumed that English language learners and students from non-dominant cultures need to learn the basics before they can tackle big ideas. Not only is this assumption wrong but it is the opposite of what students who are behind actually need (Resnick, 1999). Educational and cognitive psychologists following standard IV have designed enriched and accelerated programs rather than remedial programs for low-performing students and schools (Feuerstein, 1980; Hopfenberg & Levin, 1990). One simple example of providing high-level content for readers who are below grade level in their skills is to read to them from texts that challenge their thinking or to provide audiotapes that do the same. A student who has decoding difficulty should not be relegated to reading matter below his intellectual capacity.

Table 9: Teacher Indicators of Challenging Activities

For each instructional topic, assures that students see the whole picture as a basis for understanding the parts.
Presents challenging standards for student performance.
Designs instructional tasks that advance student understanding to more complex levels.
Helps students accomplish more complex understanding by building from their previous success.
Gives clear, direct feedback about how student performance compares with challenging standards.

(Adapted from Center for Research on Excellence, Diversity, and Education, 2002)

5. Instructional Conversation: Engage students through dialogue (see Table 10).

The instructional conversation between teachers and students is based on the idea that students have something to say beyond a presupposed answer that the teacher has in mind. Therefore, it is the teacher's role to listen carefully, make guesses about the intended meaning of the student, and adjust responses to assist the student's efforts. At least as important, in the instructional conversation format the teacher facilitates students' responses to each other. Not all conversation is mediated through the teacher.

This strategy results in much more student talk than the usual teacher-moderated discussion, giving students opportunities to practice academic language and use appropriate evidence to support their opinions or inferences. So, if the class were discussing the results of a science experiment conducted by small groups, the teacher might start the discussion off with a key question, such as, "What did you think might happen?" and allow students to respond to each other, rather than just to her. She could then selectively probe a response to move the conversation in a desired direction ("Why did you expect that, Anita?"). When many students have contributed, she might ask another question, such as, "What actually happened?" In the Language volume, we give a more thorough explanation of the instructional conversation, along with examples of how it can be carried out.

Table 10: Teacher Indicators of Instructional Conversation

Arranges the classroom to accommodate conversation between the teacher and a small group of students on a regular and frequent basis.
Has a clear academic goal that guides conversation with students.
Ensures that student talk occurs at a higher rate than teacher talk.
Guides conversations to include students' views, judgments, and rationales using text evidence and other substantive reports.
Ensures that all students are included in the conversation according to their preferences.
Listens carefully to assess levels of students' understanding.
Assists students' learning throughout the conversation by questioning, restating, praising, encouraging.
Guides the students to prepare a product that indicates that the instructional conversation's goal was achieved.

(Adapted from Center for Research on Excellence, Diversity, and Education, 2002)

C. Culturally Responsive Pedagogy

Culturally Responsive Pedagogy
Instructional practice that is designed with learners' cultural values, knowledge, and ways of learning taken into account and that empowers students to succeed in school and beyond.

Cultural Competence
The ability to recognize differences among students and families, respond to those differences positively, and to interact with others in a range of sociocultural environments (Lindsey, Robins, & Terrell, 2003).

Many terms have been used to signify the process of taking students' cultural backgrounds into account when designing curriculum, instruction, and assessment: culturally relevant, culturally appropriate, culturally congruent, and culturally responsive, to mention a few. We choose the term *culturally responsive* because it seems to communicate process and action better than other terms. Making education connect with students' lives is a dynamic action process. According to Villegas (1991):

> A culturally responsive pedagogy builds on the premise that how people are expected to go about learning may differ across cultures…Cultural differences present both challenges and opportunities for teachers. To maximize learning opportunities, teachers must gain knowledge of the cultures represented in their classrooms, then translate this knowledge into instructional practice. (p. 13.)

Bartolomé (1995) proposes that culturally responsive pedagogy alone is not enough to moderate the effect of historical inequity on involuntary minorities. Bartolomé emphasizes that methods by themselves do not suffice to advance their learning. She advocates what she calls "humanizing pedagogy," in which a teacher "values the students' background knowledge, culture, and life experiences and creates contexts in which power is shared by students and teachers" (p. 55). This power sharing and valuing of students' lives and cultures may provide a positive counterforce to the negative sociocultural experiences of students; it can enable them to see themselves as empowered within the context of school and allow them to retain pride in their cultural heritages.

Ladson-Billings (1995) also addresses the need for pedagogy to promote the empowerment of students. Speaking of "culturally-relevant pedagogy," Ladson-Billings says, "A next step for positing effective pedagogical practice is a theoretical model that not only addresses student achievement but also helps students to accept and affirm their cultural identity while developing critical perspectives that challenge inequities that schools (and other institutions) perpetuate. I term this pedagogy culturally relevant pedagogy" (p. 469).

Ladson-Billings (1995) outlines three criteria for teacher proficiency in culturally relevant teaching:

- An ability to develop students academically. This means effectively helping students read, write, speak, compute, pose and solve higher order problems, and engage in peer review of problem solutions.
- A willingness to nurture and support cultural competence in both home and school cultures. The key is for teachers to value and build on skills that students bring from the home culture. For example, teachers of African American students can use the lyrics of rap songs to teach elements of poetry before they proceed to a study of more conventional poetry.
- The development of a sociopolitical or critical consciousness. Teachers help students recognize, understand, and critique current social inequities.

These conceptualizations of pedagogy appropriate for a multicultural, multiethnic, multiracial society are much more powerful and inclusive than older approaches that focus on relatively superficial or visible aspects of culture and identity. This is not to say that the "three F's" approach to culture (foods, fairs, and festivals) does not exist in some places. For example, a recent study in a Midwestern elementary school with more than 50% Southeast Asian students (mainly Hmong) showed that Hmong ethnic differences were dealt with in terms of "exotic traditions such as shamans, bride kidnapping, coining, and strict gender role separation…Curricular focus was on teaching a 'foreign' culture through the festivals and food fairs, but not in regard to culturally relevant pedagogy" (Adler, 2004, p. 73).

Activity 8: Examining an Instructional Example

Instructions to Participants

Read the short vignette in Figure 10 and be prepared to answer discussion questions in the group.

Figure 10: Exposing Inequities Through Education

A class of African American middle school students in Dallas identified the problem of their school being surrounded by liquor stores (Robinson, 1993). Zoning regulations in the city made some areas dry while the students' school was in a wet area. The students identified the fact that schools serving white, upper-middle-class students were located in dry areas while schools in poor communities were in wet areas. The students, assisted by their teacher, planned a strategy for exposing this inequity. By using mathematics, literacy, social, and political skills, the students were able to prove their points with reports, editorials, charts, maps, and graphs… students' learning became a form of cultural critique. (Ladson-Billings, 1995, p. 477)

Discussion

- **How does Ladson-Billings's vignette demonstrate the first criterion for culturally relevant teaching—developing students academically—and the third criterion—developing a sociopolitical or critical consciousness?**
- **How might the teacher in the vignette have drawn on students' cultural competence in order to accomplish the project?**
- **How could students have turned their research into action?**
- **What kinds of projects can you envision in your own setting that could capitalize on one or more of Ladson-Billings's criteria?**

Linking to Students' Knowledge and Ways of Knowing and Learning

This is a key component of Nieto's principles and CREDE's standards, and it is in line with current views of development, learning, and cognition. Linking to students' current state of knowledge is also at the heart of constructivist educational reforms embodied in such standards as those of the National Council of Teachers of Mathematics and the International Reading Association and National Council of Teachers of English. Culture, however, is not typically considered explicitly in such standards; and ways of knowing and learning are not addressed except, sometimes, in the sense of using multiple modalities to engage students. It is left to teachers to figure out what students' knowledge is and how they learn best.

African American Students: Exploring Culturally Responsive Pedagogy

Many educators, researchers, and theorists have contributed to our understanding of what constitutes culturally responsive pedagogy. In this section, we use African American culture to illustrate some of the issues that arise in considering how to make pedagogy culturally responsive. McLoyd (2004) suggests that to understand African American children, we need to move beyond race and ethnicity and examine African Americans' cultural experience and cultural frameworks. African Americans constitute a heterogeneous group,[13] and not all of the cultural dimensions we discuss apply to all of them, of course. However, numerous African American educators have suggested that certain cultural patterns are common and that understanding them can be helpful to teachers (Boykin & Bailey, 2000; Ladson-Billings, 1994; Shade, 1989).

Boykin and Bailey (2000) have identified three Afro-cultural themes that are prominent in the lives of low-income African American students:[14] *communalism*, *movement*, and *verve*. Communalism (also called interdependence) refers to the valuing of social bonds and interconnectedness. Movement refers to the valuing of self-expression through music, dance, and rhythm (particularly syncopated rhythm). Verve refers to the valuing of "heightened levels of physical stimulation" (p. 3). These authors suggest that verve can be manifested in a preference for intensity, variability, and density of stimulation.

Other theorists and researchers have identified additional aspects of African American culture, such as "spirituality, …expressive individuality, …belief in the interconnectedness of humans and nature, [and a] preference for oral/aural modalities of communication" (McLoyd, 2004, p. 187). Also part of African Americans' culture historically is a strong valuing of literacy, literature, and oratory (Lee, 1995, 2000; Perry, 2003).

[13] Not only are there variations based on factors such as socioeconomic differences, regional experiences, and personal histories, but African immigrants who came to the U.S. in the 20th and 21st centuries are also likely to vary in many ways from those whose families in the U.S. go back to the time of slavery.

[14] The population Boykin and Bailey have studied is low income.

Implications for Teaching African American Students

How can classrooms be responsive to students who are oriented to life and learning in the ways described by African American researchers? Ladson-Billings (1994) has described teaching that reflects a communalistic approach in a chapter entitled "We Are Family." She lists the following characteristics of classrooms that are culturally relevant (her term) for African American students:

- Teacher-student relationship is fluid, humanely equitable, extends to interactions beyond the classroom and into the community.
- Teacher demonstrates a connectedness with all students.
- Teacher encourages a "community of learners."
- Teacher encourages students to learn collaboratively. Students are expected to teach each other and be responsible for each other (p. 55).

Project-based and thematic approaches to instruction are natural conduits for student collaboration. They allow for what has been called *differentiated instruction*, or providing many different ways for students to engage in learning related to the same standards (Hall, 2002). The community project described by Ladson-Billings (Figure 10) provides an excellent opportunity for whole-class and small-group collaboration and is based on content meaningful to students.

With regard to movement and verve, a multiple intelligences orientation to teaching and learning could naturally capitalize on these aspects of African American culture. Well-known African American teacher, Carrie Secret, uses music of all kinds in her primary classroom in Oakland, California. She uses "Black popular and classical music and European classical music…to help her students center and calm themselves, and to help them focus" (Perry, 2003, p. 57). "Secret's classes are full of movement and action, much of it collective. The children sing and dance to serious themes. They do art and write stories and essays. They play games. All of these things are for a purpose" (Hilliard, 2003, p. 153). Capitalizing on great African American and African oratory and literature, Ms. Secret supports her young students to interpret poetry and speeches orally—sometimes in public performances.

In Philadelphia, high school teachers have found that African American students are remarkable competitors at an intellectual sport called Mock Trials, in which students take the role of attorneys and argue cases that are based on actual law (Hilliard, 2003). Inner-city schools have beaten elite suburban schools several years running, and judges have noted that involvement of these schools has raised the level and pace of argumentation. Observers seem to be amazed that these students "who should be having trouble with the law, not enjoying it" are "sharper, more nimble on their feet, more in command of rules and strategy and presentation" than past participants (Hilliard, 2003, p. 145–146). Actually, there should be no surprise, given the well-documented tradition in African American culture of creative verbal games like "The Dozens," in which ritual insults are traded in rapid-fire fashion (Smitherman, 1998). These students must have been waiting for an opportunity to show their verbal skills in an educational context.

Researcher Carol Lee has shown how the oral and literate traditions are expressed in the 20th- and 21st-century fiction of African American writers. She has used such writing as a springboard for African American high school students to connect with their own linguistic and cultural knowledge (Lee, 1995, 2000). At first, students did not appreciate the African American dialect

used in the writings of Zora Neale Hurston or Alice Walker. They had absorbed the message that it was not correct or literate. But they gradually came to see how powerful these writings were, in part because they *did* incorporate natural dialect and oral rhetorical strategies. In addition, Lee's students were better able to identify and reconstruct the ironic, metaphoric, and symbolic meanings in both oral signifying and literature, and their reading skills improved markedly in comparison to those of students in other classes.

A component of culturally responsive pedagogy is, of course, respect for students' cultural selves. Yet, it is difficult to achieve real respect without understanding what is below the surface of students' behaviors. For example, students who have learned at home to help their peers (a communalistic behavior) may find themselves accused of cheating when they try to help their classmates (Nelson-LeGall & Resnick, 1998; Rothstein-Fisch, Trumbull, Isaac, Daley, & Pérez, 2003). In fact, there are many fascinating accounts of cross-cultural misunderstandings about what constitutes cheating. Among some cultures, anything short of actually taking another student's paper and completing it is not considered cheating (Fleck, 2000). Students' physicality and movement may be judged inappropriate or even willful misbehavior, when at home it is not only tolerated but appreciated.

This short foray into issues of culturally responsive pedagogy for African American students is not exhaustive in any sense, but it does illustrate how connections can be made to some dimensions of students' cultures. Gardner (1983) notes:

> The aim should be to design educational environments that are respectful of diversity rather than to construct specialized schools for different ethnic groups….Indeed many of the criticisms about traditional schooling [as it affects African American students]—that it is passive, individualist, impersonal, and irrelevant in nature—have also been voiced by educators and researchers in reference to students generally…[T]eachers should become familiar with and incorporate into their learning activities cultural knowledge that is meaningful to students' lives. It is additionally important to establish warm, personal, and supportive relationships between teachers and students. Such relationships depend on the creation of flexible participation structures that legitimize different styles of interaction and use a variety of tasks that value and require the use of different competencies. (Gardner, 1983, p. 28)

Cultural Models for Engaging the World: Individualism and Collectivism

As we mentioned in the first section of this volume, one way of thinking about culture is as a set of models for thought and action. Two macro-level models that have been delineated are individualism and collectivism (sometimes called independence and interdependence).[15] Each one represents a cluster of interrelated values and associated ways of interacting with the world. Trumbull et al. (2001) explain, "The continuum of 'individualism-collectivism' represents the degree to which a culture emphasizes individual fulfillment and choice versus interdependent relationships, social responsibility, and the well-being of the group. Individualism makes the former the priority, collectivism the latter" (p. 19).

However, even to speak of values oversimplifies how basic cultural orientations are. Markus and Kitayama (2003) suggest that the differences between cultures are "not just differences in values; they [are] most strikingly differences in the theories of being and reality" (p. 280). Like other cultural models, individualism and collectivism are often invisible to the people who live within those respective webs of meaning. However, when cultures come into contact, people quickly recognize that different values, beliefs, and ideas have come into play, even when they are unsure what those values, beliefs, and ideas are.

The dominant culture of the U.S. is highly individualistic (Greenfield & Cocking, 1994; Hofstede, 2001; Markus & Kitayama, 1991; Spindler & Spindler, 1990). So strong is the value for individual choice in the U.S. that it has sometimes been called the "Republic of Choice" (Friedman, 1990). "[A]utonomy, independence, and initiative" are held out as the goals of human development (Cooper, Baker, Polichar, & Welsh, 1994, p. 73). In contrast, most of the cultures of recent immigrants are distinctly collectivistic (Greenfield & Cocking, 1994), and "collective support, allegiance [to family and community], obligation…and responsiveness to others" are held out by such cultures as goals of human development (Cooper et al., p. 73).

Among world cultures, a collectivistic orientation is often found among American Indians, Latin Americans, Africans, and Asians (Greenfield & Cocking, 1994). African American culture has been described as more collectivistic than the dominant U.S. culture in terms of family orientation and kinship help but more individualistic than many other cultures in terms of its emphasis on individual achievement and self-expression (Boykin & Bailey, 2000; Hollins, 1996; Ladson-Billings, 1995).

[15] The term *communalism* used by Boykin and Bailey (2000) is equivalent to collectivism.

Activity 9: Deconstructing a Misunderstanding

Instructions to Participants

Read the vignette in Figure 11, and discuss with a partner what you think happened. Why did the situation become so volatile that school personnel and mothers became upset? Use your discussion to prepare you to answer the discussion questions below in the whole group.

Figure 11: Mismatches in Cultural Expectations

In an urban neighborhood populated mostly by immigrant Latino families, mothers routinely walked their children to the elementary school. Many of them, along with their preschool children, remained to share the school's federally funded breakfast with their children who attended the school. School administrators and teachers saw it as a problem that the mothers were eating food that "belonged" to the school children. Stating that parents were violating federal and district guidelines, administrators posted signs stating, "**ONLY STUDENTS ARE PERMITTED IN EATING AREA**" and "**SOLAMENTE SE PERMITEN A ESTUDIANTES EN AL AREA DE COMER**." Mothers were offended and protested the action by coming as a group into the school and requesting to see the principal. Their action was perceived as hostile by school personnel, who found it more civil (and manageable) to meet individually with parents.

(Based on Quiroz & Greenfield, in press.)

Discussion

- **What values may have been behind the mothers' decision to stay at school and eat breakfast with their children?**
- **What values, beyond a need to follow federal regulations, might have guided the administrators' actions?**
- **Why might the sign have incensed the mothers? Why did they come to the school as a group?**
- **How did the school personnel and the parents judge each other?**
- **How might the situation have been dealt with differently by school personnel, taking cultural value orientations into account?**

No culture is 100% collectivistic or individualistic, and individuals within a culture vary as to how collectivistic or individualistic their own values and behaviors are—both generally and in terms of specific situations (Markus & Kitayama, 1991). There are noticeable variations within the U.S., depending in part on region (Vandello & Cohen, 1999). In addition, each culture within those mentioned above as collectivistic has its own ways of being collectivistic (Markus & Kitayama, 2003). However, understanding these two cultural models can be extremely useful to educators because many of the kinds of cultural conflicts students face at school can be explained with reference to them (Greenfield, Quiroz, & Raeff, 2000; Trumbull, Rothstein-Fisch, Greenfield, & Quiroz, 2001). Parents who want their children to be modest and cooperative may be dismayed to hear their teachers heap praise on them and encourage them to be competitive. Teachers who want students to be autonomous learners and speak out during class discussions may express disapproval or disappointment when students always want to help each other and sit quietly during discussions.

These kinds of differences in expectations can be attributed to more or less individualistic or collectivistic cultural models. Parents may be trying to raise a human being who will be interdependent, while the school is trying to foster a student who is independent. The vignette below illustrates a collision of values that might have been predicted if the participants understood each other's cultures better.

Trumbull et al. (2001) contrast individualism and collectivism as they may play out in school settings. The following table draws from their work with immigrant Latino families. Keep in mind that cultures and individuals within cultures will vary in terms of where they fall on the collectivist-individualist continuum, so their perspectives on schooling will vary as well. The tensions illustrated in the table could be summarized as a difference in focus on the following:

1. Individual vs. group success
2. Independent vs. cooperative learning
3. Praise for self-esteem vs. feedback for improvement
4. Cognitive skills as separate vs. cognitive and social skills as integrated
5. Oral expression vs. listening to authority
6. Individual property vs. communal property
7. Self-control vs. group control of behavior
8. Parent's role includes academics vs. parent's role is to socialize

The numbers on the list above refer to the numbers in the table on the following page.

Table 11: Two Cultural Perspectives

Individualistic Perspective	Collectivistic Perspective
1. Student should "achieve his or her potential" for the sake of self-fulfillment.	Student should "achieve his or her potential" in order to contribute to the social whole.
2. Student should work independently and get his own work done. Giving help to others may be considered cheating.	Student should be helpful and cooperate with his peers, giving assistance when needed. Helping is not considered cheating.
3. Student should be praised frequently to build self-esteem. The positive should be emphasized whenever possible.	Student should be given feedback for improvement. Praise should be stated in terms of student's ability to help family or community.
4. Student should attain intellectual skills in school; education as schooling.	Student should learn appropriate social behaviors and skills as well as intellectual skills; education as upbringing.
5. Student should engage in discussion and argument in order to learn to think critically (constructivist model).	Student should be quiet and respectful in class because he will learn more this way (transmission model).
6. Property belongs to individuals, and others must ask to borrow or share it.	Much property is communal and not considered the domain of an individual.
7. Teacher manages behavior indirectly or emphasizes student self-control.	Teacher has primary authority for managing behavior but also expects peers to guide each other's behavior.
8. Parent is integrally involved with student's academic progress.	Parent believes that it is teacher's role to provide academic instruction to student.

As useful as cultural models like that of individualism and collectivism can be for highlighting cultural differences, they can lead to the common error of stereotyping. Sub-groups and individuals within a culture exhibit extreme variation. As McLoyd (2004) says, "One of the core criticisms…against characterizations of culture that rely on general orientations is their failure to capture disagreements in cultural meanings among those occupying different positions in a group's social hierarchy" (p. 186). One need only think of differences in the ways women versus men, or poor versus rich, within a cultural group construct meaning within the same broad cultural setting. Moreover, even within the heavily individualistic U.S., there are regional variations in the degree of individualism or collectivism, based on the histories and current realities of those regions (Vandello & Cohen, 1999). For example, the Northwest has been described as very individualistic, with its frontier mentality and sparse population, whereas the Southwest is far more collectivistic, at least in part because of the influence of a sizeable Mexican American population.

McLoyd asserts, "Social conflict and opposition are as much a part of culture as are shared meanings, understanding, and cohesion" (p. 186). Sometimes, the same values are held but to a different degree. Research shows, for example, that members of different generations (adolescents versus parents) may endorse the same values, but parents may adhere to them more strongly (Cooper et al., 1994). At the same time, there are cultural patterns that are meaningful. Learning about other patterns can open one's mind to understanding that ways of thinking and behaving that look deviant or disorganized according to one's own view of the world are quite normal and organized according to another's.

Common Themes of Community and Collaboration

The literature on culturally responsive pedagogy parallels other literature on school reform that emphasizes students and teachers as communities of learners and touts collaboration as one of the most powerful ways to learn. The evidence suggests that these two features of teaching are the underpinnings of many successful educational programs in a large range of settings.

Developing a Sense of Community

One goal of fostering a classroom community is to contribute to students' development as participatory citizens in the wider society (Schaps & Lewis, 1999). This is one of the purposes of schooling in a democratic society (Goodlad, 2002). The Child Development Project (CDP) in Oakland, California, has spent the last 25 years working with teachers in more than 3,000 schools and conducting research on how to promote cognitive, ethical, and emotional growth through community building at both the classroom and school level (Battistich, 2001; Kim, Solomon, & Roberts, 1995; Solomon, Battistich, Watson, Schaps, & Lewis, 2000). CDP defines *sense of community* as "the student's experience of being a valued, influential member of a group committed to everyone's growth and welfare" (Schaps & Lewis, 1999).

CDP has done long-term follow up of students and found that increases in sense of community actually cause the development of "intrinsic academic motivation, concern for others, democratic values, skill and inclination to resolve conflicts equitably, altruistic behavior, intrinsic prosocial motivation, enjoyment of helping others learn, inclusive attitudes toward outgroups, and positive interpersonal behavior in class" (Schaps & Lewis, 1999). Some of the methods that have led to these outcomes are class meetings, where the whole group meets to discuss interpersonal

conflicts or other matters that students or teacher want to address in the group; whole-school projects that may also involve the outside community, such as gathering relief supplies for flood victims in Central America; and many collaborative group investigations.

Caring, academically challenging teachers who take the role of intellectual and moral authorities (while promoting student autonomy) are at the heart of the community-building process. Schaps and Lewis (1999) note that for the process to be effective it must involve the whole school. What gets in the way of community building? CDP's research has shown that emphasis on extrinsic rewards and teacher authority for resolving conflicts undermine a sense of community. And, most recently, emphasis on increasing scores on standardized tests has taken time away from the kinds of activities that promote a sense of community.

Fostering Collaboration

Substantial research supports the belief that allowing students to help each other learn is good, not just for social development but also for academic development. Those who receive information perform better, and those who give it may clarify their own understanding (Gillies, 1999). Cooperative learning has been shown to be an effective instructional approach with students from many backgrounds (Calderón, Hertz-Lazarowitz, & Slavin, 1998). Members of cooperative learning groups usually have assigned roles that contribute to the completion of a task. Cooperative groups are intended to foster positive interdependence among students, that is, to "promote each other's success by helping, assisting, supporting, encouraging, and praising each other's efforts to achieve," (Johnson & Johnson, 1999, p. 124).

True *collaboration* involves students' active participation in group learning, problem solving, and investigation (Jones, Valdez, Nowakowski, & Rasmussen, 1995). It is different from cooperative learning as commonly conceived in that the teacher does not assign roles, and students are more involved in setting goals and monitoring their own progress vis-à-vis those goals. Groups are usually heterogeneous, representing students from different backgrounds with different kinds of skills and knowledge (Cohen, 1994; Cohen & Lotan, 1994). The tasks are less pre-structured, and the focus is on "flexible, learning-centered investigations" (Jones et al., 1995, web document with many sections, no page number). Students may also work with members of the community, as the students would do in completing the activity Ladson-Billings described above.

Teaching to Multiple Intelligences

Another source of culturally responsive pedagogy is the expansion of ways that students can participate in learning. Teachers have used multiple intelligence theory to consciously provide such opportunities. As mentioned in the first section of this volume, Howard Gardner's concept of multiple intelligences has appealed greatly to educators because it rings true to them: Educators observe that students can be intelligent in many ways and they want to recognize and capitalize on a larger range of intelligent behaviors in their instruction.

Activity 10: Exploring Your Learning Experiences

Instructions to Participants

Use each question below in Figure 12 as an opportunity to reflect on your own developmental path as a learner. Write a brief response to each question on a separate piece of paper and select one response you would be willing to share with the group.

Figure 12: Your Own Learning Odyssey

- Think about your own multiple intelligences. What are your strengths, and how did you develop them inside and outside of school?
- Sometimes we learn things alone, but more often we develop our knowledge, ability, and skills with the help of others. Think about someone who helped you learn. What did he or she do that was helpful?
- Think about a time when how you felt affected your learning—when you were confident, unsure, comfortable, uneasy, strong, or intimidated. Think about how you acknowledge students' feelings and how those feelings affect learning.
- We often learn things without understanding their relevance to our lives until later. Think about an "aha!" you had when something you learned connected with a new situation.
- What were your most challenging learning experiences? What obstacles did you encounter? How did you overcome them?
- (Optional) Talk with colleagues or friends about their experiences at times when they were ahead of the group, and times when they were behind. How did it feel? How did they cope?

Discussion

- **What did you remember or discover about your own learning path in the process of answering the questions?**
- **Did the process of reflection stimulate any thoughts about your own students or teaching situation (real or anticipated)?**
- **What was your "aha!" moment?**

Multiple intelligence (MI) theory and practice has produced positive changes in the ways teachers look at their students. A study conducted by Campbell and Campbell (1999) of the success of six schools that claim to have implemented Gardner's MI theory concluded:

> Perhaps the most surprising finding from our study of MI schools is that restructuring is not necessarily achieved through external programs, resources, facilities, or district or state mandates. Indeed, meaningful restructuring first takes place within the minds of teachers and their beliefs about the nature and possibilities of their students. From there, all else follows. (p. 97)

Below, in Table 12, we list possible activities, materials, and strategies linked to each form of intelligence. This is not, of course, an exhaustive list. It is intended to stimulate teachers' thinking about what might be appropriate in their own settings with the students they teach.

Table 12: Summary of the "Eight Ways of Teaching"

Intelligence	Teaching Activities	Teaching Materials	Instructional Strategies
LINGUISTIC	oral presentations (by teacher or students), word games, discussions, storytelling, choral reading, journal writing, drama, independent reading and writing in many genres	books, tape recorders, stamp sets, typewriters, books on tape, copies of speeches and other orations, journals	read about it, write about it, talk about it, listen to it, perform it
LOGICAL – MATHEMATICAL	problem solving, science experimentation, mental calculation, number games, critical thinking, brain teasers, debating and other activities that require logical evidence	calculators, math manipulatives, science equipment, math games	quantify it, think critically about it, conceptualize it
SPATIAL	visual presentations, use of metaphor, art activities, mapping activities, imagination games, mind visualization, problem solving and planning involving use of space	graphs, maps, videos, LEGO sets, building blocks, art materials, cameras, picture library, graph paper, tangrams, pattern blocks, 2-D and 3-D models	see it, draw it, build it, color it, mind-map it visually
BODILY – KINESTHETIC	hands-on learning, drama, dance, sports, tactile activities, relaxation exercises	building tools, clay, sports equipment, manipulatives, tactile learning resources	build it, act it out, touch it, get a "gut feeling" about it, dance it
MUSICAL	rapping, songs that teach, music of all kinds	tape recorder, tape collection, musical instruments, books of music	sing it, rap it, listen to it

INTERPERSONAL	cooperative learning, peer tutoring, community involvement, social gatherings, simulations	board games, party supplies, props for role plays, any materials for shared activities	teach it, collaborate on it, interact with respect to it, help solve conflicts
INTRAPERSONAL	self-management of one's learning, independent study, self-evaluation of learning progress; self-awareness of one's internal cognitive and emotional states	self-checking materials, journal, materials for projects	connect it to your personal life and cognitive and emotional strengths, make choices with regard to it
NATURALISTIC	outdoor explorations, observations, experiments, tours of particular environments, cataloguing of plants and animals	notebooks, binoculars, magnifying glasses, microscopes, tape recorders, books about nature and environments, photographs and films	observe it, explore it, listen to it, describe it, gather and organize data or impressions about it

(Adapted from Armstrong, T. [1994]. *Multiple Intelligence in the Classroom*. Alexandria, VA: ASCD.)

Activity11: Capitalizing on Multiple Intelligences

Instructions to Participants:

In small groups, select one or more of the intelligences. Next, think of an instructional activity (linked to a particular academic standard or group of standards) that could maximize use of those intelligences and one or more CREDE standards. Use Tables 6–10 and 12 in this volume to stimulate your thinking. Consider how the activity could be made appropriate for the cultural mix of students you or members of your group teach or an imagined classroom that represents some aspects of diversity. Write a one-paragraph summary of the activity to share with the group later. In Table 13, note which CREDE standards the activity meets. Be prepared to discuss with the group. Note: Descriptions of the intelligences as Gardner conceived them are in Table 3.

Table 13: Combining CREDE Standards With Multiple Intelligences

	Standard I: Joint Productive Activity	**Standard II:** Context-Visualization	**Standard III:** Language Development	**Standard IV:** Challenging Activities	**Standard V:** Instructional Conversation
LINGUISTIC					
LOGICAL – MATHEMATICAL					
SPATIAL					
BODILY – KINESTHETIC					

MUSICAL					
INTERPERSONAL					
INTRAPERSONAL					
NATURALISTIC					

Discussion

- **Please describe your activity and explain (a) what intelligences and (b) which CREDE standards it addresses.**
- **What did you find easy or difficulty about this exercise?**
- **What advice can you offer each other about enhancing the power of the activities discussed?**

D. Addressing the Achievement Gap

The principal purpose of this giude is to support educators to improve the schooling of students who have historically been caught in the achievement gap. All aspects of this volume address the achievement gap in some way, but issues related to longstanding societal beliefs and attitudes that get to the heart of the matter deserve special attention. Teachers who care about serving all of their students have no doubt examined how attitudes toward difference create certain expectations of students, how various forms of racism interfere with desirable educational outcomes, and how vested social interests get in the way of positive school change. In this section, we hope to provide an equity- and research-based review of the issues that promotes reflection and can serve teachers' purposes in advocating for steps to close the achievement gap.

Activity 12: Listening to Students

Instructions to Participants

Read Kai James's letter and be prepared to answer the discussion questions, first in your small group and then in the whole group.

Figure 13: Letter From Kai James

Kai James was a freshman in high school when he wrote the following letter.

Dear High School Teacher,

I am a new high school student and I am looking forward to these next years of my schooling. I feel the need to write this letter because I seek a different experience in high school from that of elementary school. One of the things I would like to see changed is the relationship between students and teachers. I feel that a relationship that places students on the same level as teachers should be established. By this I mean that students' opinions should be taken seriously and be valued as much as those of teachers, and that together with the teachers we can shape the way we learn and what we learn…

After years of being ignored, what the students need, and in particular what black students need, is a curriculum that we can relate to and that will interest us. We need appropriate curriculum to motivate us to the best we can be. We need to be taught to have a voice and have teachers who will listen to us with an open mind and not dismiss our ideas simply because they differ from what they have been told in the past. We need to be made aware of all our options in life. We need to have time to discuss issues of concern to the students as well as the teachers. We must be able to talk about racism without running away from it or disguising the issue. We must also be taught to recognize racism instead of denying it and then referring to those who have recognized it as "paranoid." We also need to be given the opportunity to influence our education and, in turn, our destinies.

We should also be given the right to assemble and discuss issues without having a teacher present to discourage us from saying what we need to say. Teachers must gain the trust of their students, and students must be given the chance to trust their teachers. We need teachers who will not punish us just because they feel hostile or angry. We need teachers who will allow us to practice our culture without being ridiculed. (James, 1998, pp. 109–110)

Discussion

- **What is Kai James asking teachers to do?**
- **What do you think James' experiences as an African American student have been like in school?**
- **Why do you think changing the power structure of schools is important to him?**
- **After reading this letter, what new thoughts do you have about cultural identity, development, and learning?**
- **How might James' proposal for teacher-student equality be viewed by students who have been brought up to look up to and respect teachers? How about their parents?**
- **How might it be viewed by teachers and administrators?**

Debunking the Deficit Myth[16]

The belief that the low performance of students from non-dominant cultural, ethnic, and racial groups is due solely to deficits within those students and their families has been called *the deficit myth* or *deficit thinking* (Valencia & Solórzano, 1997). Deficit thinking has a long history and has justified inequitable schooling for African Americans, Mexican Americans, children from poor families, and others on the basis of three claims: inferior genetic heritage, a culture of poverty, and environmental factors (such as poor child-rearing practices).

[16] This section owes a great deal to Valencia and Solórzano, 1997, in a chapter in R. R. Valencia (Ed.). (1997). *The evolution of deficit thinking: Educational thought and practice*. London: Falmer.

Activity 13: Challenging Cultural Assumptions

Instructions to Participants

Read the vignette in Figure 14 and be prepared to respond to the discussion questions with the larger group.

Figure 14: Snagged by Deficit Thinking: Mr. Stivale

For the past 20 years, Mr. Stivale has been a math and technology teacher at a middle school in a small city with a large Puerto Rican student population. Other teachers have heard Mr. Stivale make disparaging comments to Puerto Rican students such as, "I bet you never saw a computer until you came to the United States," or "I know you have trouble with English, so let's see if someone can translate this into Puerto Rican." These and other comments communicate Mr. Stivale's belief that Puerto Rican students, many of whom come from working-class families, have a cultural deficit. At one point during a faculty meeting Mr. Stivale asserted, "Some of these kids [referring to the Puerto Rican students] just don't want to learn, and you can't make them. It's not their fault. The problem is that their parents don't value education." He then looked around the table, assuming that others would be in agreement. Other participants looked uncomfortable, but no one challenged his statement.

Discussion

- **How do you think Mr. Stivale's cultural deficit approach affects students?**
- **What kind of information do you think Mr. Stivale needs in order to change his approach?**
- **Why do you think no one challenged Mr. Stivale's statements at the faculty meeting?**
- **As a colleague of Mr. Stivale's, how might you have responded?**
- **How has your culture been valued or devalued in your own school experience? At work?**

Activity 14: Examining Curriculum for Culture and Language

(Adapted from Hollins, 1996)

Instructions to Participants

In a small group, examine a curriculum guide or a textbook. Use the questions in Figure 15 to determine the appropriateness of its content for students from a variety of cultures and languages.

Figure 15: Questions to Guide the Evaluation Educational Materials

- How does the content provide a positive historical perspective for the related accomplishments, values, and beliefs of a culturally diverse population?
- How does the content reflect the accomplishments of different ethnic groups in developing new knowledge in the field (e.g., science, mathematics, history, art, literature, architecture)?
- In what ways does the content allow for students' use of cultural knowledge as well as knowledge about culture?
- How does the curriculum address the expectations and aspirations of the students and their families?

Discussion

- **What did you find in your investigation?**
- **What do you conclude from what you found out?**
- **What recommendations do you have for the curriculum and textbook publishers?**

Inferior Genetic Heritage

Claims that members of certain races are biologically inferior date back to the early 20th century and have been reasserted periodically since then. People of African origin have been consistently maligned by this racist claim, but so have Mexicans (Takaki, 1993) and American Indians (Gould, 1981). These claims have been used to justify inequitable education on the grounds that students from these backgrounds were capable only of concrete thinking and would be destined for low-level jobs.

The two most influential deficit thinking publications in the past 50 years are Jensen's article, "How Much Can We Boost IQ and Scholastic Achievement?" in 1969 and Herrnstein and Murray's book, *The Bell Curve*, in 1994. The argument, as applied to Black-White differences on IQ tests, is that (1) intelligence is inherited, (2) IQ tests measure intelligence, (3) Blacks score lower than Whites, (4) Black-White differences in IQ test scores are due mainly to genetic differences, and (5) schooling for Blacks should therefore be concrete and practical rather than highly academic (Valencia & Solórzano, 1997, p. 169).

There are so many problems with this argumentation that one hardly knows where to begin, but here are a few criticisms of it:

1. There is no agreement on exactly what intelligence is.
2. Innate intelligence, whatever it is, cannot be directly measured. All that can be measured is what has been learned (Valencia & Solórzano, 1997).
3. Because people's experiences are not equal, what has been learned must certainly differ from person to person and group to group (Hilliard, 2003).
4. Inferences about intelligence based on what has been learned by a person constitute a giant leap.
5. Assumptions that people's cognitive capacities cannot change through additional learning are spurious; there is too much evidence to the contrary (Feuerstein, 1980; Perkins, 1995; Sternberg, 1985).

The Culture of Poverty

The notion of a *culture of poverty* is that there is a class of poor people (also called the "cultural underclass," Baca Zinn, 1989) who are in a self-sustaining pattern of deprivation over years or generations because of inferior values and dysfunctional behaviors, such as dependency on public assistance. Some have focused on behaviors associated with the culture of poverty, such as teenage pregnancy, crime rates, divorce, and child abuse (Valencia & Solórzano, 1997). Sociological definitions of the underclass have entailed their location in communities with high numbers of welfare recipients, school dropouts, unemployment, one-parent families, and poverty (Valencia & Solórzano, 1997).

This form of deficit thinking "perpetuates the myth that behavior is equated with values" (Valencia & Solórzano, 1997, p. 185). "[B]ehavior cannot be equated with values. In other words, simply because a person behaves in a certain way does not mean he desires to do so because of his beliefs or values" (Allen, 1970, p. 372–3, cited in Valencia & Solórzano, 1997, p. 185). This

way of thinking also blames the poor for their predicament, overlooking the role of economic change (including a decrease in factory and skilled labor jobs to which one could aspire and with which one could support a family) and structural inequalities related to access to education; housing; healthcare; and basic nutrition. Research on generational poverty (as distinguished from temporary situational poverty experienced by educated people) reveals that it is both these inequities in access to the most essential resources and also the debilitating social, physical, and emotional effects of such deprivation that keep people in poverty (Beegle, 2000, 2003).

Racism should not be overlooked for its role in maintaining an underclass in U.S. society. One effect of racism has been housing discrimination, which produces racial segregation and concentrations of poverty in certain areas. According to one analyst, concentrating income deprivation in a small area causes conditions of "intense disadvantage…[that] are mutually reinforcing and cumulative, leading directly to the creation of underclass communities…." (Massey, 1990, p. 350, cited in Valencia & Solórzano, 1997, p. 187.)

Home Environment Factors

This permutation of the deficit myth blames poor parenting, low parental value for education, and lack of adequate intellectual stimulation at home for students' lower school performance. Parents from non-dominant cultural, ethnic, and racial groups (particularly those with less income and education) are often encouraged to take school-provided workshops on how to parent or how to help their children with schoolwork (Epstein, 1998; Onikama, Hammond, & Koki, 1998). Parent involvement in children's schooling is believed to be an important factor in school achievement (Henderson & Mapp, 2002), and schools often work hard to involve "minority" parents, but with mixed results (Chavkin & Williams, 1993). Perhaps it is because schools approach these parents from a deficit perspective. When such parents are asked, they say they value education highly, are very interested in their children's schooling, and have high aspirations for them but do not find schools' ways of approaching them very inviting, comfortable, or responsive to their needs and interests (Dauber & Epstein, 1993; Diaz, 2000; Goldenberg & Gallimore, 1995; Valdés, 1996). (See Culture, Family, and Community below.)

Assumptions about the deprived nature of the home life of some students are often based in lack of understanding about students' lives, particularly about language and literacy practices at home (Perry, 2003; Valencia, Henderson, & Rankin, 1985). As Valencia and Solórzano (1997) point out, instruments designed for research on dominant culture families and children may not be sensitive to features of students' home cultures, so that cultural resources and strengths go unnoticed. In addition, children are often described as "at risk" simply by virtue of their cultural, racial, ethnic and/or socioeconomic status; labeling them in this way makes any subsequent failure "person-centered" (and expected) (Valencia & Solórzano, 1997, p. 196) and is deficit focused rather than strength focused.

Maintaining High Expectations

The complement to avoidance of deficit thinking is holding high expectations for all students. We have alluded to the importance of high expectations above, in terms of their contribution to a healthy student identity. Although high expectations need to be reflected in district-wide policies, ensuring that they are acted on comes down to teachers and the degree to which they take responsibility for student learning individually and collectively in a school (Diamond et al., 2004). A study of Philadelphia schools concluded, "Teachers' refusal to accept any excuses for failure separated the classrooms in which students succeeded from those in which they did not…. The teacher, according to students, acted out of a determination to promote success…[Teachers] 'stayed on students' until they got it" (Wilson & Corbett, 2001, pp. 120–121, cited in Benard, 2003, p. 120).

Maintaining high expectations for students from low-income families of non-dominant cultural, racial, and ethnic groups requires a conscious detaching from pervasive societal myths about who can achieve (as we have discussed above). This is fundamentally important because the fact is that "teachers beliefs about students' ability to learn influence achievement" (Lee & Loeb, 2000, p. 7). When teachers view students' backgrounds as barriers to learning, they also tend to take less responsibility for their learning. "Not only are students more engaged in the learning process when teachers have high expectations for them and are willing to take personal responsibility for them…they also learn more... (p. 7).

Diamond et al. (2003) cite research, including their own, showing that teachers tend to view African American students as less capable than their White peers, particularly if they are from low-income families. To make matters worse, teachers' expectations apparently have greater influence on African American students than they do on White students (Ferguson, 1998, cited in Diamond et al., 2003). Diamond et al. interviewed 51 teachers and administrators in five Chicago elementary schools, three 100% African American, one predominantly Chinese American, and one predominantly White. They found, "In the majority white and majority Chinese schools, 71 percent of teachers emphasized students' assets over their deficits, compared to only 23 percent of the teachers in the African American schools" (p. 82). In the two all-African American schools where families were 90% and 98% low income, only 10% of teachers emphasized student assets. The patterns of response point to a collective failure to hold high expectations for students, apparently on the basis of their racial/ethnic and income status.

It is certainly true that some students present greater challenges than others, in part because of the previous learning opportunities they have had or lack of resources in their homes and communities. However, in schools where there is a sense of collective responsibility for students' learning, teachers take a proactive approach and seek ways of adjusting instruction to meet students' needs (Diamond et al., 2003). Such teachers do not give up on their students, but foster caring relationships with them. Benard (2003) says, "At the core of caring relationships are high expectations that reflect the teacher's deep belief in the student's innate resilience and capacity to learn" (p. 120).

High expectations are empty without strategies for engaging students and tapping their intrinsic motivation. Helping students recognize their own strengths is a good starting point for the teacher. Benard (2003) suggests that a multi-intelligence approach can help to surface students' different patterns of strength. Once again, connecting to students' lives and interests is critical to engaging them intellectually and emotionally.

As usual, teachers are the bottom line in effective and equitable educational practice. However, administrators have a responsibility to support opportunities for teachers to renew themselves and share their strategies for maintaining high expectations and standards. Diamond et al. (2003) mention particular organizational structures in the Chicago schools that promote teacher exchange and mutual support. At one school, they heard about the Breakfast Club, a regularly scheduled teacher meeting for which administrators provided breakfast. Teachers discussed articles they had read and shared ideas for instruction. Another school had a regular meeting called Teacher Talk, which was similar to the Breakfast Club. In those schools, administrators held teachers collectively responsible for student learning, but they also recognized the challenges teachers faced and the need to support them.

Detracking for Equity

Tracking
Categorizing students into groups and assigning them to streams or tracks of coursework that have different levels of academic content (Callahan, 2005; Oakes, 1985).

Detracking
Disbanding the practice of sorting students by supposed ability into groups for participation in differentiated streams of coursework; providing access to the full range of academic coursework for all students, along with the support they need to achieve.

Assigning students to vocational, college preparatory, or general course paths (*tracking*) is generally a high school practice, though it begins in some districts by middle school (LeTendre, Hofer, & Shimizu, 2003). Tracking results in granting "access to challenging academic opportunities to some while denying it to others" (Callahan, 2005, p. 307). Even when official tracking does not take place before middle school or high school, it begins unofficially for students of whom little is expected and who do not have opportunities to learn and achieve at high levels in elementary school. It is not surprising that "low-income and minority students [are] more likely to be in low ability classes for the non-college-bound" (Oakes & Guiton, 1995, p. 3). After students are assigned to a lower track, they rarely move up to a higher one (Oakes & Guiton, 1995).

The low tracking of students defined as low income and minority is not only a function of teacher preparation, expectations, and grades. Velasco, Maples, Mickelson, and Greene (2002) note, "Strong evidence indicates that middle-class white parents aggressively pursue higher tracks for their children who, in turn, often push to be placed in higher tracks" (p. 3). Such parental pressure, not surprisingly, leads to higher placements for White students with the same qualifications (Velasco et al., 2002). One interpretation of such findings is that White parents and their children feel entitled to placement in higher tracks (McIntosh, 1988, regarding "White privilege"). Another is that such parents, whose cultural knowledge is more in sync with that of schools and who have had access to greater educational advantages themselves, have the inside knowledge on how to work the system.

Velasco et al. (2002) examined tracking practices and parental advocacy with academically able White and Black students and found that middle-class parents—both Black and White—who had greater educational advantages used similar strategies to advocate for their children and were more successful advocates for their children. "In contrast, parents with children in low-level classes often appeared to lack information about the advantages of the higher tracks *and* the ability to access them (p. 12). One difference between Black and White middle-class parents was their level of trust in the school system. They often feared that the school would not recognize their level of concern for their children because of stereotyping—for example, that Black parents don't care—or their children's ability and worth.

English language learners are often effectively tracked early on in programs that provide low-level academics, on the basis of the belief that English must be developed before academics (Callahan, 2005; Katz, 1999; Valdés, 1998). They are frequently relegated to low tracks in high school because of confusion regarding the need for English development with low academic ability, even though research suggests that placing them in low tracks is a greater determinant of academic outcome than is language proficiency (Callahan, 2005). In other words, a high-level class is more likely to result in higher achievement for these students, even though they still have language development needs.

"[T]racking exposes students to different levels of academic content, academic discourse, and teacher quality" (Callahan, 2005, p. 307), and it is often justified on the grounds that it is appropriate because students are matched to different tracks on the basis of their ability (Oakes & Guiton, 1995) or their prior level of performance (Callahan, 2005). This stance has been called a *meritocratic* one because it presumes that students are tracked on the basis of merit, that is, on the basis of their ability and performance. However, it fails to take into account the malleability of intelligence and how opportunities to learn and expectations shape performance. It is clear from the above-mentioned literature that the system is based more on privilege and perceptions than merit.

For all of the reasons cited above, many educators concerned with equity have called for the *detracking* of schools (Mehan, 1997; Oakes & Wells, 1998; Oakes et al., 1997). There are many alternatives to tracking that can result in the provision of high-level and challenging education for all students while grouping them heterogeneously. Lloyd (1999) presents an exhaustive review of research on mixed age and non-graded grouping and concludes that they are two promising ways to provide differentiated instruction that meets the needs of a wide range of students within a single class. Oakes and Wells (1998) describe an exciting array of detracking practices they have documented in schools around the country, such as providing honors activities within heterogeneous classes, allowing almost any student to participate in an honors program, providing a support class in math for students who need review, and use of a marine science curriculum that relies more on small-group projects and field trips than textbooks.

The problem with implementation of virtually all of the innovations that schools have designed is not that students have not achieved but that parents of high-track students opposed such innovations. "What upset the parents most was not the quality of the curriculum. It was that their children were no longer being singled out and treated differently.…At risk for the families of high-track students is the entire system of meritocracy on which they base their privileged posi-

tions in society. As this system begins to crack, these parents often employ tactics that make reform politically impossible. Given that detracking is basic to standards-based reform, policymakers and educators stand forewarned" (Oakes & Wells, 1998, p. 41).

Intervening With Institutional, Cultural, and Individual Racism

Racism
A system of advantage based on race (Tatum, 1997, p. 6); the use of power by one group that deprives another group or groups of access to the material, intellectual, physical, and social benefits of society.

Institutional Racism
A system of policies, practices, or structures of social institutions that systematically benefits one racial group over another in terms of access to opportunities or services.

Cultural Racism
Systematic endorsement of the superiority of the beliefs, symbols, and cultural rules of behavior of one racial group over another (Derman-Sparks & Phillips, 1997, p.10).

Individual Racism
Attitudes, beliefs, and behaviors that perpetuate a system of advantage for one racial group over another.

Prejudice
Preconceived judgment or opinion, usually based on limited information (Tatum, 1997, p. 5).

Stereotype
A fixed notion of the characteristics of members of a particular group, without regard for individual differences.

Racism, like any ideology of power (e.g., classism and sexism), is a destructive social force, and it damages everyone by undermining the fundamental values of democracy: equality, fairness, freedom, and justice. It taints personal relationships and diminishes everyone touched by it. Whereas the tendency in the United States is to think of racism in Black/White terms, racism can be experienced by people from any ethnically, linguistically, or culturally non-dominant group. It is difficult to imagine that any educator intends to be racist or to support racist policies or practices. That is probably the one thing that makes facing racism most difficult: Because none of us espouses racism, we find it hard to believe that our own actions could promote it. Yet our inaction may well do so. However, educators are in a prime position to identify and intervene with racism in schools, particularly if they are open to becoming allies of groups and individuals who have been targets of discrimination (Tatum, 1997).

Institutional racism in schools can take the form of basing decisions about who has access to gifted or other special programs on tests that are culturally racist, that is, tests that rely heavily on knowledge of dominant culture experience, language, and ways of thinking. It is also inherent in assumptions that a certain racial pattern of achievement is to be expected (Pollock, 2001).

An example of institutional racism comes from the study by Velasco et al. (2002), cited above. In the course of their research, these researchers heard from parents about three cases in which high school students (two Black and one White) had medical problems that caused them to miss a considerable amount of school time. The White student, Arthur (who had a heart problem), was offered the opportunity to drop a class and make it up later through independent study. He was also provided with tutoring at home. Chris, a Black student who had to have several eye surgeries, was offered nothing by the school. His mother, by dint of having a sister who was a principal in a neighboring state, learned that he might be entitled to services and pressed for them. But they were slow in coming, and Chris had to re-take several courses. Phil, another Black student, suffered a head injury. His mother was in constant contact with the school, but it did not offer any services for him, and she didn't know to ask for them. Rather, *school officials suggested Phil transfer out of the challenging program in which he was enrolled*. We recount these stories because they put a human face on the kinds of inequities that students from non-dominant cultural, ethnic, and racial groups often suffer.

Cultural racism can be seen in curricula that represent the perspective of only the dominant cultural group, instructional practices that privilege one dialect over another, and libraries that do not reflect the diversity of cultures of a school. *Individual racism* may be a matter of simply accepting things the way they are and not questioning the "fact" that some students cannot be expected to do as well as others or that some parents simply do not know how to rear their children, and thus, comply with institutional policies that systematically exclude certain students from opportunities. The common denominator across all three forms of racism is *power*.

Racism and Ethnic Stereotypes

Some instances of unwitting racism are founded on positive stereotypes. For example, Asian Americans have frequently been touted as the "model minority" (Kim & Yeh, 2002). This is because, as a group, Asian Americans have not experienced the widespread school failure commonly observed among Mexican Americans, Puerto Ricans, African Americans, and Americans Indians. One explanation for this general pattern is that they have been willing immigrants to the United States. However, there are two serious problems with casting Asian Americans as the model minority. First, the stereotype itself is disturbing because, like all stereotypes, it perpetuates ignorance and gets in the way of learning about individuals and their families (Kim & Yeh, 2002). Second, it can mean overlooking the needs of Asian American students.

There is great variability in how Asian American students fare in U.S. schools. Collapsing data on Asians as a group, rather than looking at patterns among Chinese American, Hmong American, Bangladeshi American, Vietnamese American, Korean American, and Asian Indian American students, masks different kinds of needs students may have and can lead to the justification of current practices that are not effective (Gewertz, 2004). Issues that some cite as underaddressed vis-à-vis Asian students from many groups are harassment and racial discrimination in schools (Gewertz, 2004; Kohatsu et al., 2000, cited in Kim & Yeh, 2002), and lack of attention

to devising ways to involve Asian parents in the schools, given that many are working more than one job and that language barriers and lack of knowledge about schools may keep them away (Gewertz, 2004).

Whereas ethnic stereotyping is a negative phenomenon, it should be distinguished from racism in the sense that it does not always entail the power differential that racism does. For example, when U.S. visitors to Germany expect efficiency and cleanliness, it may mean that they do not see the complexity and variation in German life. However, it is not likely to have the same negative impact that overt, racist beliefs and actions do. Stereotypes are an unfortunate extension of useful generalizations that may help people begin to understand other cultures.

Different Perceptions

It is not unusual for teachers and students from different racial and ethnic backgrounds to have different perceptions of equity and inter-racial and inter-ethnic relations in schools. Because the majority of teachers and administrators are White and native English speakers, and because their views tend to dominate, non-dominant views may not be heard or appreciated—a situation that can be extremely frustrating for those in the non-dominant groups (Tatum, 1992).

A recent national poll illustrated a discrepancy in the perceptions of White teachers and students as compared to their non-dominant culture peers (Reid, 2004). The poll was conducted with a representative sample of 2,591 public school teachers and 1,102 students in grades 7–12 on the occasion of the 50th anniversary of the Brown v. Board of Education of Topeka decision outlawing school segregation. Whereas 69% of White teachers and 60% of Hispanic teachers[17] believed that integrated schooling has been achieved, only 31% of Black teachers did.[18] Whereas 63% of White teachers thought that all students had access to equal academic opportunities, 52% of Hispanic and only 27% of Black teachers believed that proposition.[19]

When asked to rank factors contributing to the achievement gap between White and Asian students on the one hand and African American and Hispanic students on the other, teachers tended to blame student and home factors. When they were asked how the gap could be closed, 85% of teachers chose "increased parent involvement." Black and Hispanic teachers were more likely to identify low teacher expectations and discrimination as sources of the gap.

Taking Positive Action

What can teachers and administrators do? Many have not had access to the kind of pre-service or in-service courses and workshops that would prepare them to deal better with new, diverse educational environments (Gollnick, 1992; Henze, 2000). Successfully addressing diversity issues, including racial and ethnic conflicts, depends on both understanding and willingness to be proactive (Henze, 2000). In the case of inter-group conflict, avoiding the matter does not appear to be a good answer. According to Boethel (2003), "[S]everal studies noted that conflicts rooted in race, culture, or class tend to be exacerbated when school staffs attempt to avoid explicit discussion about them" (p. 44).

[17] We use the racial and ethnic terms used in the poll.

[18] Actually, schools are still "highly segregated along racial/ethnic lines (Crosnoe, 2005, p. 272).

[19] According to studies, "minority students not only attend *different* schools from their White peers, they attend *worse* schools (Crosnoe, 2005, p. 272).

Certainly, high-quality professional development experiences are important to building cultural competency. However, there are other steps teachers and administrators can take to routinely reduce the incidence of racism in any school environment. Below are some specific suggestions from those who have been engaged in anti-racist education:

- Support your district to gather data in ways that will allow disaggregating by race and ethnicity (as well as other aspects of identity such as gender and socioeconomic class) for examination of patterns of privilege and differential access to programs and courses.
- Hold high expectations for all students, and be willing to speak out when you see that low expectations of certain groups are accepted.
- Oppose tracking systems that group high achievers and low achievers separately.
- Advocate for equitable allocation of resources within the district and school.
- Ensure that all families are aware of their and their children's rights and help them get the best possible services for their children. Immigrant and less educated families may not be privy to the meaning and implications of grades, the nuances of course selection, and the like.
- Include parents in discussions about what is best for their children academically, orienting them to how programs and courses are chosen.
- Design culturally responsive curriculum, instruction, and assessment, taking into account the students you are teaching.
- Observe how different students participate in classroom activities to determine what strategies reach which students, and involve students in choices about their work.
- Group students with the purpose of fostering interactions among students from different backgrounds; also allow students to group themselves at times.
- Collaborate with other teachers to find out what has worked for students from different backgrounds with different skills and interests and to evaluate the adequacy and cultural representativeness of the school library.
- Do not allow racial or ethnic slurs to go uncorrected. Use them as an opportunity to educate students about their impact and the fact that they will not be tolerated in the school. A school policy should be in place.
- Collaborate with other teachers, administrators, and parents to establish a conflict resolution plan that is culturally appropriate.
- Be willing to engage in "courageous conversations" about race with colleagues and community members (Singleton & Linton, in press).
- Listen to what others have to say, and work hard to recognize other perspectives.
- Cultivate opportunities to learn from people unlike yourself.
- Examine your own values, and evaluate whether your behaviors are in line with them.

The Culture of School

Institutions have cultures, just as people do. With few exceptions, school culture in U.S. schools represents a system of beliefs, values, and practices that reflect the implicit values of the dominant U.S. culture (Hollins, 1996). Hollins notes that these cultural values influence how students interact with each other, how teachers and students interact, and how the rewards system is organized (p. 33). School governance, classroom organization, teacher and student roles, grading systems, and age groupings all reflect tacit values about how schooling ought to be implemented. As Deal & Peterson (1990) state:

> This invisible, taken-for-granted flow of beliefs and assumptions gives meaning to what people say and do. It shapes how they interpret hundreds of daily transactions. This deeper structure of life in organizations is reflected and transmitted through symbolic language and expressive action. (Deal & Peterson, 1990, p. 7, quoted in Peterson, 1994, p. 2)

As Bruner (1996) says, "School curricula and classroom 'climates' always reflect inarticulate cultural values as well as explicit plans; and these values are never far removed from considerations of social class, gender, and the prerogatives of social power" (p. 27). Speaking of what has been called "the hidden curriculum," Bruner continues:

> Surely…the school can never be considered as culturally "free standing." What it teaches, what modes of thought and what "speech registers" it actually cultivates in its pupils, cannot be isolated from how the school is situated in the lives and culture of its students. For a school's curriculum is not only *about* "subjects." The chief subject matter of school, viewed culturally, is school itself. That is how must students experience it, and it determines what meaning they make of it. (p. 28)

Promoting a School Culture That Works for Teachers and Students

Like culture in general, school culture is likely to be invisible to its adherents: It may be accepted as "just the way we do things around here." But schools can and must make conscious their implicit ways of going about the business of education if they are to fashion a culture that is compatible with the needs of their students, particularly when their populations are composed of students from non-dominant communities. "Business as usual" is not working and the achievement gap is evidence of that fact. School culture often does not meet the needs of the staff for a satisfying and constructive work environment, including teachers, administrators, paraprofessionals, and volunteers (Fullan, 1991; Peterson, 1994; Rosenholtz, 1989). However, there are a substantial number of research findings that likely resonate with what every teacher could probably define as a positive school culture.

Features of a school culture—many of which will sound familiar by now—include:

- Collaboration among students and teachers
- Teachers' demonstration of caring for students
- High academic expectations combined with supports for learning
- Opportunities for student participation in shaping the curriculum
- Recognition of students' strengths
- A teacher norm of responsibility for student success

- Competent leadership that buffers teachers from outside stressors and fosters their professional life, including ongoing professional development
- Inclusion of parents in the school community

(Benard, 2003; Diamond, Randolph, & Spillane, 2004; Fullan, 1991; Nieto, 1999; Noddings, 1984; Peterson, 1994; Rosenholtz, 1989; Schaps & Lewis, 1999; Valenzuela, 1999.)

A successful school culture also incorporates a sociocultural perspective on learning and development. Educators, students, and parents alike are able to examine and discuss the values and beliefs underlying schooling and child-rearing practices and engage in ongoing dialogue about how to help all members of the school community feel as though they belong and can be productive participants (Collignon, Men, & Tan, 2001; Delgado-Gaitan, 1994; Mehan, Villanueva, Hubbard, & Lintz, 1996; Trumbull, Greenfield, & Quiroz, 2003).

For both teachers and students, a collaborative approach to learning and problem solving is a key element to a positive school culture. A collaborative adult culture within a school allows all of those who care for and serve students to be supported, achieve greater success and satisfaction, and survive a very demanding policy environment (Peterson, 1994). In such a culture, administrators support groups of teachers to meet to share ideas, address professional issues, and jointly solve problems. "In this way, teachers become a profession of learners who engage in inquiry, reflective practice and continuous problem solving and, at the same time, build leadership capacity" (Fullan, 1995, cited in Silins, 2000, p. 5). A parallel process in the classroom promotes a student community of learners, a sense of social affiliation, and a rich learning experience (Resnick & Klopfer, 1989; Solomon et al., 2000). This kind of classroom, because it engages students actively and can accommodate their interests and questions, can be responsive to a multicultural, multiethnic, multiracial group of students.

E. Resources

Print Materials

Delpit, L. (1995). ***Other people's children: Cultural conflict in the classroom***. **New York: New Press.**
Delpit's book, which has become a classic in the arena of multicultural and cross-cultural education, presents Delpit's own experiences as an educator but casts them in theoretical perspectives that can be applied broadly. She addresses language and literacy and how, in a world of unequal valuing of different ways of using language, all students need to learn the power codes of society. Her research in Papua, New Guinea, is both interesting and informative, as one sees the same kinds of social issues surrounding language difference replicated in a very different environment.

Lee, S. J. (1996). ***Unraveling the model-minority stereotype: Listening to Asian American youth*****. New York: Teachers College Press.**
Asian students have wrongly been lumped together without regard for their individual and individual cultural group differences. This book provides insights into specifics of Asian Americans' educational needs.

Nieto, S. (1999). *The light in their eye: Creating multicultural learning communities.* Multicultural Education Series, J. A. Banks (Series Ed.). New York: Teachers College Press.
Long known for her research on Puerto Rican American communities, Nieto gives a vision of how educators and policy makers can promote positive learning experiences for students from non-dominant backgrounds.

Rothstein-Fisch, C. (2003). Bridging Cultures teacher education module. Mahwah, NJ: Lawrence Erlbaum.
For professional developers or teacher educators who want to introduce the framework of individualism-collectivism, the Module provides a three-hour presentation, complete with overheads and a script that can be adapted for different audiences. Teacher educators have found the Module most successful when spread over two three-hour class sessions.

Rothstein-Fisch, C. (Ed.). (2003). Readings for Bridging Cultures. Mahwah, NJ: Lawrence Erlbaum.
Six readings, ranging from short articles published in Educational Leadership to research articles published in journals, are reproduced here. The authors are primarily Bridging Cultures Project researchers, including one of the teacher-researchers involved in Project. The short volume can be used as background preparation for presenting the Module, described above.

Schaps, E., & Lewis, C. (1999). Perils on an essential journey: Building school community. *Phi Delta Kappan, 81*(3), 215-218.
This short article talks about the promises and pitfalls of trying to build school communities in the context of national pressures to focus on test scores.

Sheets, R. H., & Hollins, E. R. (Eds.). (1999). *Racial and ethnic identity in school practices: Aspects of human development.* Mahwah, NJ: Lawrence Erlbaum Associates.

Singleton, G. E., & Linton, C. (in press). *Courageous conversations about race: A field guide for achieving equity in schools.* Thousand Oaks, CA: Sage.
Singleton and Linton's book is based on longstanding professional development and research of the Pacific Educational Group, based in San Francisco. Singleton is a well-known and effective anti-racist educator who has helped thousands of teachers to approach the topics of race and racism positively and constructively.

Spindler, G., & Spindler, L. with Trueba, H., & Williams, M. D. (1990). *The American cultural dialogue and its transmission*. London: The Falmer Press.
This may be foundational reading for those who want to learn about American culture.

Swisher, K., & Deyle, D. (1992). Adapting instruction to culture. In J. Reyhner (Ed.), *Teaching American Indian students* (pp. 81–103). Norman, OK: University of Oklahoma Press.
The authors discuss the failure of schooling to respond to cultural differences and what is known about creating culturally responsive pedagogy for American Indian students. Although the chapter is not new, it is still appropriate for helping educators understand the importance of culture and context in the schooling of American Indian students.

Trumbull, E., Rothstein-Fisch, C., Greenfield, P. M., & Quiroz, B. (2001). Bridging Cultures between home and school: A guide for teachers. Mahwah, NJ: Lawrence Erlbaum. This book, written for teachers and those who give professional support to teachers, is based on an action research project conducted by teachers and professional researchers. It recounts the innovations of seven Los Angeles area teachers, as they successfully sought to improve instruction for their immigrant Latino students and to work more closely and effectively with parents.

Web sites

African Voices
http://www.mnh.si.edu/africanvoices

This Web site, organized by the Smithsonian Institute's National Museum of Natural History, allows viewers to learn about the history and culture of Africa through a variety of media.

The Bridging Cultures Project
http://www.wested.org/cs/we/view/pj/26

Started at WestEd in 1996 and ongoing in the form of workshops and publications, the Web site has links to documents and resources related to the Project.

The Center for Research on Education, Diversity, and Excellence
http://www.crede.org

CREDE, based at the University of California, Santa Cruz, conducts research and develops publications related to improving the achievement of underserved students. Many useful short articles on successful educational approaches and programs can be downloaded from this site.

The Chèche Konnen Center
http://projects.terc.edu/cheche_konnen

The Chèche Konnen Center is engaged in a national reform initiative to improve elementary and middle school science teaching and learning for language minority students. The Center utilizes a research-based approach to teacher professional development that integrates inquiry and reflection in three areas: science and mathematics, teaching and learning, and culture and language. Educators interested in constructivist science teaching with English language learners can access an array of information and resources on the site.

The Educator's Reference Desk
http://www.eduref.org

The Educator's Reference Desk has replaced the AskERIC service. Educators can find articles on virtually every educational topic, included those related to culture, language, and race. The site also offers sample lesson plans in a range of subject areas.

The Knowledge Loom
http://www.knowledgeloom.org/crt/index.shtml

The Education Alliance at Brown University operates this professional development Web site. It addresses a wide variety of topics regarding what works in teaching and learning. The Culturally Relevant Teaching spotlight highlights success stories from exemplary classrooms and points practitioners to additional resources and research.

The Learning Research and Development Center
http://www.lrdc.pitt.edu

Located at the University of Pittsburgh, the LRDC has conducted research on learning and teaching for more than four decades. The Web site provides links to seminal and recent publications about the Center's research. Dr. Lauren Resnick is the Director of LRDC.

The National Institute for Community Innovations
http://nccrest.edreform.net

Sponsored by the U.S. Department of Education, The National Institute for Community Innovations has organized national Education Reform Networks. These networks—groups of people and organizations that are leaders in school reform—have identified high-quality professional development materials on a wide range of topics in education. Two links of interest to educators concerned with equity and excellence for diverse populations are http://nccrest (The National Center for Culturally Responsive Educational Systems) and http://equity.edreform.net (The Equity Network).

New Horizons for Learning
http://www.newhorizons.org

This organization is dedicated to transforming education to prevent students from falling through the cracks. Thus, it has a broad agenda, addressing the needs of all kinds of students and of teachers and schools. New Horizons' philosophy of learning and teaching is based on the theories of Howard Gardner and Reuven Feuerstein, hence compatible with the notion that intelligence and cognitive ability are modifiable through good teaching. Its quarterly online journal has articles on topics ranging from stepping stones to literacy, to student leadership, arts education, and special technology options.

North Central Regional Educational Laboratory
http://www.ncrel.org/sdrs/areas/issues/educatrs/presrvce/pe3lk1.htm

This site provides an overview of issues relating to multicultural education and educating teachers who will work with culturally and linguistically diverse students. Additional readings are available online through the links provided.

Tolerance.org
http://www.tolerance.org/index.jsp

This Web site is devoted to promoting tolerance and social justice. Part of the Southern Poverty Law Center, the Teaching Tolerance organization provides many useful resources for teachers, parents, and children free of charge, including a biannual journal and curriculum kits. The site also addresses current events and news topics related to tolerance.

The United States Holocaust Memorial Museum
http://www.ushmm.org/

The site offers a wealth of information about the Holocaust and has articles that can be downloaded and used by both teachers and students.

Note: The Web sites of all of the regional educational laboratories provide useful information and printable documents related to successful education of diverse populations. Their Web addresses are as follows:

The Regional Educational Laboratory at AEL
www.ael.org

The Laboratory for Student Success (LSS)
www.temple.edu/lss

Mid-continent Research for Education and Learning (McREL)
www.mcrel.org

North Central Regional Educational Laboratory (NCREL)
www.ncrel.org

The Northeast and Islands Regional Educational Laboratory at Brown University (LAB)
www.lab.brown.edu

Northwest Regional Educational Laboratory (NWREL)
www.nwrel.org

Pacific Resources for Education and Learning (PREL)
www.prel.org

The Regional Educational Laboratory at SERVE
www.serve.org

Southwest Educational Development Laboratory (SEDL)
www.sedl.org

WestEd
www.wested.org



PART IV:

Culture, Families, Communities, and Schools

CULTURE, FAMILIES, COMMUNITIES, AND SCHOOLS

Family
A primary social group, often organized in part for the rearing of children, that can take many forms: one or more parents plus one or more children; parent(s), children, and others such as grandparents or aunts and uncles; a primary caregiver (related or not) and a child.

Community
A group of people "who have some common and continuing organization, values, understanding, history, and practices" (Rogoff, 2003, p. 80).

School
A place organized for teaching and learning; a formalized institution for educating people.

Families and communities can be valuable resources for schools and teachers in that they provide knowledge about the culture and language of their students. Tapping these resources requires changing how schools perceive the parents' and communities' values and beliefs. These changes include building a school culture that will accept values, beliefs, and ways of viewing the world that are often quite different from those of the mainstream population. As diverse populations come into the community, changes such as these will have to take place to ensure excellent and equitable education for all students. In this way and by collaborating with communities, schools also become valuable resources for families.

A. Schools Connecting With Families

Teachers and families have in common the goal of supporting children and youth to develop into adults who are contributing members of society, can support themselves, and are able to fulfill their own personal promise. The specifics of the desired outcome and how the process gets accomplished vary, depending upon who the people are and the sociocultural settings in which child rearing and schooling occur. Nevertheless, teachers and families have a vested interest in collaborating for the sake of students and have much to learn from each other. Families need to learn from schools about policies and practices that are legally required or locally determined, what services are available in the school, what students' rights are, and how students can prepare for secondary and post-secondary education. Schools need to learn from families about their goals for their children, what their children's interests and experiences are, and how families would like to be involved with the schooling process.

Activity 15: Challenging Cultural Assumptions About Parental Involvement

Instructions to Participants

In a small group or in pairs, read the following teacher comment and answer the questions in Figure 16.

"I feel so bad for these kids. The parents don't come to parent-teacher conferences. I've never seen any at open house either. I don't think they really try to help the kids with school. I wonder, maybe in their culture, education isn't as important."—Third-grade teacher

Figure 16: Looking for Answers

Refugees and immigrants come to the United States under many different circumstances. Each group is as different as the countries from which they come; they have different beliefs, values, and languages.

- What are some possible reasons why the parents may not have participated in their child's schooling?
- What questions might the teacher ask herself or others to gain insight into parents' beliefs regarding their participation in school?
- In what ways might the parents be participating in their child's education without the teacher's knowledge?
- What kinds of opportunities can the teacher explore to collaborate with families?

Discussion

- **What ideas did your group have for understanding why some parents may not be overtly involved in their children's schooling?**
- **What constructive actions can teachers take?**

Accepted wisdom, backed up by increasing research, is that parents' (families') involvement in their children's schooling promotes school adjustment and academic achievement (Boethel, 2003; Henderson & Mapp, 2002; Hoover-Dempsey & Sandler, 1997; Mattingly, Prislin, McKenzie, Rodriguez, & Kayzar, 2002)[20]. Categorical funding programs, such as Title 1, require parent advisory groups as a condition of funding. It is probable that the majority of schools engage in explicit efforts to engage parents in school site events such as parent-teacher conferences as well as activities at home, such as assistance with homework (Boethel, 2003). Some theorists make the distinction between parent participation and parent involvement, suggesting that the former takes place at the school and the latter at home. We use the term parent involvement to refer to both, recognizing that it can refer to a very large range of activities.

Research has shown that although a large proportion of parent involvement efforts are directed toward "minority" families, schools experience greater difficulty engaging such families in school-related activities, particularly at the school site (see review in Trumbull, Rothstein-Fisch, & Hernandez, 2003). However, research continues to show that parents from all cultural, racial, ethnic, and socioeconomic groups have high educational aspirations for their children and want to be involved in their children's education (Dauber & Epstein, 1993; Goldenberg & Gallimore, 1995; Goldenberg, Gallimore, Reese, & Garnier, 2001; Mapp, 2003). When parents do not participate, it is almost certainly in part because of the ways in which schools attempt to involve them and their families (Boethel, 2003; Delgado-Gaitan, 1991; Trumbull & Hernandez, 2003).

Families from non-dominant communities often share a sense of alienation from or frustration with mainstream institutions, but there is vast variety in the particulars of their experiences. Immigrants and native-born peoples have very different social and cultural histories. Weinstein-Shr (1995) maintains that in order to help refugee and immigrant families, schools need to develop an understanding of the linguistic, religious, and geographic differences (including differences between rural and urban settings) among their diverse student populations. For example, the first wave of adult refugees from Vietnam, Cambodia, and Cuba had university educations. In contrast, most of those arriving later were farmers with little or no education.

Weinstein-Shr (1995) notes that the following three issues need to be understood when working with a refugee population: survival, communication, and power. Many refugees fled from their home country and have survived despite some very difficult experiences. After arrival in the United States, these groups count on their traditional kinship bonds and community organizations to provide them with resources for solving some of their immediate problems. With such support, they may survive; however, they typically face many challenges as they learn a new and very different language (and U.S. communication styles). Attaining the social power that would allow them to be heard in the context of dealing with U.S. institutions such as schools is a long process—if it happens at all (Collignon et al., 2001).

[20] Much more research of a rigorous nature is needed to draw firm conclusions about what kinds of strategies and processes work best within different contexts. Mattingly et al. (2002) stress the limitations of existing research.

Different Culture-Based Expectations

As one might expect, the forms of involvement or participation that schools promote are based on majority culture perspectives. They often require parents to take on roles with which they are not comfortable or familiar (Delgado-Gaitan, 1991; Goldenberg & Gallimore, 1995, Valdés, 1996). Both teachers' and parents' construction of the parent role in schooling incorporates beliefs about the parenting and child-rearing role, about child development, and about appropriate parental home-support roles in children's education (Hoover-Dempsey & Sandler, 1997). But these two constructions may differ considerably. Many parents see their role as "instilling cultural values, talking with children, and sending them to school well fed, clean, and rested" (Scribner, Young, & Pedroza, 1999, p. 37). Most teachers have a broader idea of the role parents should take.

In the United States, we often hear the saying, "The parent is the child's first teacher." But this is not a fact. It is a particular belief situated in a cultural context. The saying reflects the idea that mothers should take on the role of teaching academics such as numbers and letters[21] or helping with homework. In Mexico, one hears the saying, "The teacher is the child's second mother" (La maestra es la segunda mamá). This saying reflects the belief that the teacher should take on the role of contributing to the child's upbringing—caring for him and being concerned about his total development—cognitive, emotional, social, and moral (Goldenberg et al., 2001). Although many teachers of young children embrace the notion of teaching "the whole child," this emphasis tends to lessen as children get older.

It is not only Mexican American families who may expect the teacher to take responsibility for a broader developmental scope. Morris (2002) mentions "teachers in parent-like roles" (p. 232) as one of five features of a highly successful inner-city St. Louis school serving mostly African American students. He says, "At Farragut, teachers and staff members take on aspects of the role of parents with their African American students, as described by Michele Foster [1997] and Jacqueline Jordan Irvine [1990] in their studies of African American teachers' relationships with students" (p. 232).

What many families would like in the way of school involvement is more informal interactions with teachers and more personal relationships with them (Diaz, 2000; Finders & Lewis, 1994; McCaleb, 1997; Trumbull et al., 2001). However, as Reese (2002) points out, one cannot assume that parents and family members are wedded to only certain roles and are not willing to take on new ones. For instance, parents' roles are changing in Mexico as increasing numbers of parents serve on advisory boards, go to monthly meetings, and fundraise for schools (p.51). Studies show that Mexican American parents will take on new roles when they are invited to do so in ways that are respectful and supportive (Trumbull, Rothstein-Fisch, & Hernandez, 2003; Trumbull & Hernandez, 2003).

Even so, the participation of parents from different cultural orientations is not likely to look the same (Birch & Ferrin, 2002; Gallimore & Goldenberg, 1993; Henderson & Mapp, 2002; Moosa, Karabenick, & Adams, 2001). Another reason (other than differential role construction) is that their educational experiences may be quite different from those of dominant-culture parents. Accordingly, they come to the task of supporting homework or reading to their children with

[21] Mexican children are not routinely taught to recite the alphabet; instead, they learn syllable patterns (ba/be/bi/bo/bu; ma/me/mi/mo/mu) early on because that helps them more in learning to read, given the syllabic regularity of Spanish.

different sets of expectations or "scripts" for how the activity should be conducted (Gallimore & Goldenberg, 1993; Reese & Gallimore, 2000). For instance, they may focus more on word identification or correct penmanship than higher level comprehension processes (Gallimore & Goldenberg, 1993). Family members may be quite involved in helping their children at home but not participate as much in school-level involvement activities (Henderson & Mapp, 2002; Lopez, Scribner, & Mahitivanichcha, 2001). Scribner, Young, & Pedroza (1999) found that teachers were more likely to think of parent involvement as entailing school-site activities, whereas parents thought of it as entailing at-home activities.

Standard Forms of Parent Involvement

The most frequently used framework of parent involvement activities is that of Joyce Epstein (1995), which includes six components:

1. Parenting (helping parents with parenting skills);
2. Communicating (assuring effective communication about school programs and students' progress);
3. Volunteering (organizing volunteers and providing volunteer opportunities);
4. Learning at home (involving families in working with their children at home);
5. Decision making (including families in school decisions); and
6. Collaborating with the community (coordinating resources and services) (listed in Boethel, 2003, p. 19).

In Table 14 on the following page, we take components 1 through 5, combining 1 and 4 under the heading Parent Education, and make suggestions for modifications to the approaches usually taken. We include parent conferences as a separate category because they are perhaps the most common form of school-based parent involvement activity (Carey, Lewis, & Farris, 1998).

Table 14: Approaches to Parent and Family Involvement

Common Approaches to Parent Involvement	Suggestions for Modifying Implementation
• Parent education - How to parent - How to help with learning at home	Parent education efforts of schools often represent a deficit perspective, that is, that parents need "fixing." The better approach is to find out what parents want. Teachers can ask whether parents would be interested in learning how to help children at home with homework and the like. If they want a workshop on discipline or child-rearing, offer it. Otherwise do not offer it. Some parents may want to learn skills along with their children.
• School-to-home communication - Newsletters - Letters - Notices - Report cards - Conferences - Signs posted	Be sure that written notices and newsletters are only one form of communication. Cultivate opportunities for face-to-face communication, even if they are very brief. Make communication two-way: Elicit ideas and concerns from parents and family. Invite families to the school in as personal a way as possible. Do not assume that they know when they are welcome. Do not hesitate to repeat invitations to immigrant parents; they may view the repetition as a sign of politeness and genuine interest. Avoid curt, directive signs on the school campus such as, "All parents report to the principal's office," or, "No parent parking in teacher spaces." Consider alternatives such as a sign reading, "All parents welcome" above the outside door to the office or, "Families, please use designated spaces" (with an arrow pointing to a spot with ample room). Immigrant parents may need considerable guidance on how to interpret report cards. Paraprofessionals from their cultures can assist with interpretation.
• Volunteer opportunities	Expand notions of how family members can volunteer. Be flexible about requirements for specific times and the nature of the task. Ask family members what they would like to do and how the school can help make that possible. Offer parents the opportunity to learn how to help if they are interested. Many parents will rise to the occasion if they are respected and genuinely asked for their help.
• School decision making	Ask parents for advice about school decisions affecting their children. Some parents may not want to participate in curricular or instructional decisions, but they may have ideas for curbing absenteeism, such as how to help each other's children get to school.

• Parent-teacher conferences	Consider holding small-group conferences and extending the time frame for each conference. Let parents take the lead first by asking them what their concerns are. Some parents will participate more when the topic is, "How can we help our children improve in reading?" rather than, "Here's what your child needs to do."
• School-wide events	Encourage family participation in designing such events as parent night or open house. Allow families to bring pre-school-age children. Some will be comfortable with a child-care arrangement; some will not want to leave their children with a stranger unless they know the person. Find out from parent volunteers how to reach others who may not attend such events often.

Epstein's parent involvement components are those that are generally initiated by the school. Delgado-Gaitan (1991) offers three different possible categories: 1) school-initiated activities controlled largely by the school; 2) activities in which power is shared between schools and parents; and 3) activities established by parents to respond to their own agenda, on which school staff are invited to collaborate.

Barriers to Family-School Connections: What Can Be Done?

Boethel (2003) cites six common barriers to family involvement. We present them below in Figure 17, slightly modified. The text within brackets has been added to Boethel's.

Figure 17: Barriers to Family Involvement

1. *Contextual factors*, such as lack of time, child care, transportation [and inflexibility in school schedules]
2. *Language barriers* due to parents' lack of English proficiency and school personnel's lack of proficiency with parents' home languages [and ways of communicating]
3. *Cultural beliefs* related to the roles families [and schools] consider appropriate [for parents and teachers]
4. *Lack of understanding* by families of the practices and policies of U.S. schools [and schools' lack of understanding of families' beliefs and practices]
5. *Lack of knowledge* by families about the subject matter of homework
6. *Exclusion and discrimination* by school staff or other parents who head parent organizations or committees

(Adapted from Boethel, 2003)

Activity 16: Overcoming Barriers to Family Involvement

Instructions to Participants

Divide into six groups. Each group should draw a number corresponding to one of the six barriers in Figure 17. As a group, discuss your selected barrier and develop three strategies to overcome it. Be prepared to share your strategies with the larger group.

Discussion

- **State the barrier your group addressed and share the ideas you had for addressing it.**
- **What additional barriers and solutions did your group identify?**

There are some general steps school staff can take to lower barriers to parent and family involvement, some of which are mentioned in Table 14 above. Figure 18 outlines some general guidelines, which should make sense in light of what we have discussed throughout this volume.

Figure 18: Guidelines for Maximizing Family Involvement

1. Cultivate ongoing opportunities to interact with family members informally and personally. This process builds relationships and mutual trust. Parents may be more comfortable asking questions or sharing information during such exchanges than they are in a formal meeting (Caspe, 2003; Trumbull et al., 2001).
2. Try to be as flexible as possible about scheduling conferences, meetings, and volunteer opportunities. Because of time, job, and childcare constraints, many parents cannot be responsive to a restrictive set of options for participation (Scribner, Young, & Pedroza, 1999; Trumbull et al., 2001; Trumbull et al., 2003; Trumbull, Rothstein-Fisch, & Hernandez, 2003).
3. Be flexible about role expectations and take cues from parents as to what they feel is appropriate for them (Goldenberg & Gallimore, 1995; Trumbull et al., 2001).
4. Work closely with paraprofessional and school volunteers from students' communities, as well as staff from community-based organizations, to facilitate communication and real two-way understanding (Adger, 2000; Collignon, Men, & Tan, 2001). They can act as cultural brokers, interpreting the school for the family and the family for the school (Birch & Ferrin, 2002; Levine & Trickett, 2000; Lewis, 2004).
5. Collaborate with these people (in item 4) to penetrate below the surface behaviors of the school and families to cultural assumptions in order to forge genuine understanding. Students are also sources of information (Caspe, 2003).
6. Conduct outreach to families. "Research shows that teacher outreach and invitations are one of the main reasons parents get involved" (Caspe, 2003, p. 117). Getting to know families is best done through both formal (e.g., conferences) and informal (e.g., parent drop-in visits) means (Caspe, 2003; Epstein, 1991; Hoover-Dempsey & Sandler, 1997).
7. Engage in ethnography, the anthropological technique of learning about people from their perspective and within their own social context, as much as possible (Spindler, 1982). Home visits can be an opportunity to learn from parents as well as to observe discourse styles between parents and child and see the child on his home turf (Kyle & McIntyre, 2000).
8. Take a "strengths-based" approach to families: All have resources that have helped them survive, many through adverse circumstances that are in part accidents of history (Kana'iapuni, 2005. p. 32). (We discuss this approach in some depth below.)

Communication

The language barrier is not strictly a matter of school personnel's and parents' understanding the vocabulary and syntax of each other's language. Often communication problems lie below the surface, at the level of invisible cultural expectations. Teachers' and parents' values are expressed in the topics they introduce in conversations with each other, in the priorities they assign to these topics, and in their approaches to setting goals for children (Greenfield, Quiroz, & Raeff, 2000).[22]

Cross-cultural communication problems have been shown to affect schools' relationships with families from non-dominant cultural groups (Greenfield, Quiroz, & Raeff, 2000; McCaleb, 1997; Valdés, 1996). In many cultures, personal communication is valued over impersonal communication, such as written notices or letters, and families want personal interchanges that are not always formal (Diaz, 2000; Finders & Lewis, 1994; Levine & Trickett, 2000; McCaleb, 1997; Morris, 2002; Trumbull et al., 2001; Trumbull, Rothstein-Fisch, & Hernandez, 2003). Schools, however, rely on written communication to convey many important messages to parents, a mode of communication that oral cultures may not be used to or find appropriate. Personal, impromptu interactions that may be the norm in some groups are not favored in schools: In many schools parents need an appointment to visit a classroom or talk with a teacher or principal.

In Valdés's 1996 ethnographic study of 10 Mexican American families in Southern California, she recounts several instances of communication breakdown between parents (mainly mothers) and schools. In one case, a mother relayed a message to her younger son's teacher via his 8-year-old brother to the effect that the younger son was not to eat the fish whenever it was provided at lunchtime because he was allergic to it. It is not clear whether the teacher discounted the message because it was verbal and from another child or whether the message was not properly delivered. However, the upshot was that the child continued to eat meals that made him miss days of school from time to time because he was sick. Not realizing that a message from a child might not be taken seriously in the way that a note from a parent would, the mother concluded that the school did not care about her son.

Other communication issues arise when the sociolinguistic norms of the dominant culture and those of a non-dominant culture conflict. This topic is dealt with in the language volume, largely in relation to difficulties students may encounter when the communication expectations of school differ from those of home. However, adult-adult communication can, obviously, suffer from similar discrepancies in rules of conversation and other forms of communication. Dominant-culture communication tends to be direct but not confrontational, whereas the communication of many cultures (e.g., Latinos and Asians of many ethnicities) tends to be indirect (Azuma, Hess, Kashigawa, & Conroy, 1980, cited in Clancy, 1986; Trumbull et al., 2001). In some cultures, such as Japanese and Arab, saying "no" to any question is avoided (Clancy, 1986; Moosa, Karabenick, & Adams, 2001). Needless to say, this conversational rule can be extremely disconcerting to a cultural outsider.

Expressions of emotion are considered by many African Americans a natural part of argumentation, and they may feel that European Americans are being disingenuous when they contain their emotions during an argument (Kochman, 1990). European Americans may be put off by

[22] This observation is not intended to minimize the value of teachers' learning a language other than English in order to communicate with families. In addition, second-language learning can be a source of cultural learning as well.

the emotional elements of argumentation, believing that they interfere with logic and reason. These are just a few of the many cultural differences in communication style, differences that are rooted in the values and beliefs of cultures and—like most deep cultural patterns—invisible to people except in a sense of discomfort they may feel when their patterns are not observed by those with whom they are speaking.

With some awareness of possible sources of communication breakdowns, teachers can contribute to more successful cross-cultural communication with parents. Although it is impossible to be an expert on every culture's style (and, of course, people within cultures vary considerably), being attuned to how parents and families seem to prefer to communicate can alert teachers to ways they can make communication more successful.

Collaborating With Communities and Community-Based Organizations

As Adger (2000) points out, because of the multiple needs of some students and families, the school alone may not be able to respond adequately to ensure students' academic success. For instance, Southeast Asian refugee immigrants (Hmong, Laotian, Cambodian, and Vietnamese) have faced a huge number of barriers to adjustment to U.S. society and schools. Community organizations that have expert knowledge about these families' languages and cultures and have gained families' trust through working with them and providing services are in an excellent position to help schools understand how to support such families.

Collignon, Men, and Tan (2001) observe, "It can be said that members of these Southeast Asian communities faced struggles in getting out of their war-ravaged countries that parallel those they now face in 'getting in' the educational system of their new homeland" (p. 39). Community-based organizations (CBOs) that specialize in serving such families can help in responding to families' lack of knowledge about the educational system and the need for greater cultural competency on the part of educators—including how to avoid confusing language proficiency issues and lack of cultural knowledge about U.S. schools with inability to learn and achieve academically (Collignon, Men, & Tan, 2001, p. 35).

Collignon, Men, & Tan also suggest that a school's collaborations with communities and community-based organizations can be seen as a form of *joint productive activity* (the first CREDE's standard). By pooling knowledge and resources, school-community partnerships can often accomplish more than either could alone. One form of collaboration is the establishment of "community schools," where community residents have access to "child and youth development, employment, immigration, housing, and related services" (Jehl, Blank, & McCloud, 2001, p. 4). In such arrangements, CBOs have representatives in the schools. Community schools have a dual benefit. By "expanding the services, supports and opportunities available to young people, they increase the opportunities for learning and development; by strengthening the school as the universally available public institution in the community, they increase assets available to community residents" (p. 4).

According to a review by the Harvard Family Research Project (2005), decades of research on what they call *complementary learning* (opportunities for learning in and out of school) support the belief that not only does family involvement support student achievement, but also out-of-school supports, such as involvement in community youth development programs and after-

school programs. These various interventions complement each other; hence, they recommend "a continuum of integrated family, school, and comprehensive community services" (p. 4). These ideas are not revolutionary, but they may be overlooked in the pressure schools endure to simply respond to federal, state, and local mandates and make it from day to day.

Warren (2005) observes that schools and CBOs have a great deal to offer each other, particularly in poor, urban areas. CBOs address the need for improved housing, health care, nutrition, safe environments, and better employment opportunities—so-called structural factors. When these factors are not dealt with, school reforms are hampered. Underfed and overstressed children cannot be expected to learn to their potential, nor can their parents be expected to have the wherewithal to engage with schools optimally. At the same time, community development efforts depend on improved educational opportunities and an informed populace (both of which schools address).

One role that CBOs can play with regard to schools is as mediators, helping schools understand families better and helping families understand schools better (Warren, 2005). They can also "bring the cultural and social assets of communities into schools and foster meaningful partnerships between schools and families" (p. 135). This kind of activity can diminish the power differential between families and school personnel and affect the culture of schools because "parents have a foundation from which to enter collaborations on a more equal footing" (p. 165). Ideally, such collaborations can also contribute to the political and social efficacy of neighborhoods. The whole process can build social capital (see definition below) among educators, families, and community members and result in greater family support within the school and at home, improving teachers on the basis of new understandings about families, and coordinating efforts to improve both the school and community (pp. 166–167).

B. Taking a Strengths-Based Approach

The kinds of school-community collaboration described above are one form of a strengths-based approach to education. They are founded on the belief that when educators and community members work together they can identify existing strengths *and* build new ones to serve the needs of all constituents.

Cultural Capital
The human, social, and material resources that families can use to reach desired goals; sometimes the term *social capital* is used to refer to the social networks and institutional supports available in a given community (Coleman, 1988, cited in Diamond, 2000).

Funds of Knowledge
The skills, knowledge, and practices that members of a family or community have acquired

Cultural Capital and Funds of Knowledge

All families have *cultural capital* of some kind—human, social, and material resources within their families and communities that they can draw upon to reach desired life goals (Bourdieu, 1977). When siblings and fathers help a student with her homework, cultural capital is being marshaled (Reese, 2002). When families form a neighborhood network to help children get to school when a parent is tied up with an ill infant, that is an instance of using cultural capital (Trumbull et al., 2001). When parents call an old friend who happens to be Dean of Students at an Ivy League university to get advice on the school's admissions practices or hire a math tutor for their child, they are using cultural capital. Parent involvement in schools depends upon cultural capital—resources like time, caretakers for younger children, transportation, and knowledge of how to interact in preferred ways in the school community (Collignon, Men, & Tan, 2001; Delgado-Gaitan, 1991; Lareau & Horvat, 1999).

It is quite evident that families have access to different kinds and amounts of cultural capital, some more immediately applicable to making the most of what schools have to offer as schools are currently organized. However, schools can see to it that the cultural capital of the families they serve is recognized by not expecting all families to exhibit the same kinds of school involvement and by respecting different modes of communication and interaction (Diamond, 2000). In the best case, they can promote greater mutuality with parents and families and nurture an environment in which parents are able to initiate their own activities.

The concept of *funds of knowledge* overlaps to a degree with the concept of cultural capital and refers to the intellectual, practical, and social resources found in families and communities. The term is associated with Prof. Luis Moll at the University of Arizona and his colleagues and the work that they have done with teachers and teachers-in-training to identify family- and community-based strengths that can be capitalized on in the classroom (e.g., Moll, Amanti, Neff, & Gonzalez 1992; Moll & Gonzalez, 2004; Moll & Greenberg, 1990).

Moll and his co-researchers and students have made home visits to "minority" student homes to interview and observe families in order to document the families' funds of knowledge. Among the kinds of specialized knowledge and skills these visitors have documented are those associated with farming, construction, auto mechanics, animal husbandry, cooking, and various kinds of trade and business. Teachers have also learned about how families use their informal social networks to enhance their economic survival and well-being. In the process, they have gained understanding and respect for families' cultural strengths and come away with ideas for classroom instruction based on what students were learning at home. Sometimes they have been able to arrange for parents to come into the classroom and talk about their work. A teacher created a unit on candy making based on one family's knowledge of the topic. The mother showed students how to make Mexican candy; and that activity was tied to mathematics and science activities related to comparisons of U.S. and Mexican candy, marketing, advertising, production, and nutrition. Perhaps the most important part of these ethnographic investigations is that they result in teachers' real understanding of the richness of their students' lives and the value of the knowledge that resides in their homes and communities.

The recommendations of Scribner, Young, and Pedroza (1999), who studied eight high-performing schools in Texas, could be useful to many schools. Their recommendations are:

1. Build on the cultural values of the community.
2. Emphasize personal contact with parents.
3. Foster communication with parents.
4. Create a warm school environment for families.
5. Make structural accommodations for families (e.g., in scheduling and in ways of participating in school activities).

After conducting research in districts that have been successful in involving migrant families in the school, Lopez, Scribner, and Mahitivanichcha (2001) observe, "Our findings suggest that the main criterion for successful parental involvement programs is an unwavering commitment to meet the multiple needs of migrant families above all other involvement considerations" (p. 261). Above, all, identifying parents' and families' perspectives and understandings is critical to understanding their behaviors. If parents do not see education as something that is connected to activities outside of school (Diamond, 2000), their lack of home attention to academics is understandable. If a parent has only a basic grasp of a school's grading system, she cannot be blamed for failing to recognize when her child is at risk for retention and failing to seek appropriate remedies (Valdés, 1996).

Resilience/Resiliency

Resilience
The internal strength, supported by external resources, to respond flexibly and adaptively to life stresses

Resiliency
The process of using one's internal strengths to respond flexibly and adaptively to life stresses

The concept of *resilience* has proven increasingly useful to understanding why some children and youth transcend social conditions such as poverty and racism. As Benard (2004) mentions, in the past decade there has been an increase in research on resilience and, consequently, a much greater recognition of its existence and importance in affecting life outcomes for children and adults. This research extends our understanding of the role and influence of sociocultural environments (in and out of school) on the development and relationships among self-concept, motivation, and learning (Greeno, Collins, & Resnick, 1996; Werner & Smith, 1992). Rutter and Rutter (1992) state:

> If we want to help vulnerable youngsters, we need to focus on the protective processes that bring about changes in life trajectories from risk to adaptation…among them (1) those that reduce the risk impact, (2) those that reduce the likelihood of negative chain reactions, (3) those that promote self-esteem and self-efficacy, and (4) those that open up opportunities. We have seen these processes at work among the resilient children in our study and among those youths who recovered from serious coping problems in young adulthood. They represent the essence of any effective intervention program, whether by professionals or volunteers. (p. 204)

Understanding historical social trends helps us to grasp why poor communities struggle to change their circumstances. A major underlying cause of social problems in poor communities is the gradual destruction of naturally occurring social networks. Social, economic, and technological changes since the late 1940s have contributed to a fragmentation of community life, resulting in breaks in the networks between individuals, families, schools, and the like—in other words, disruption of the social systems that are necessary for healthy human development.

For example, it is well documented that children in high-income households with highly educated parents tend to score higher on tests. Other predictors of achievement scores are smaller family size, age of mother at time of birth of children, and school and community characteristics (Neisser, 1998). These correlations reveal how various social factors can influence human development, learning, and achievement patterns. Berman et al. (1997) report:

Nearly all LEP [limited English-proficient] and other language-minority students are members of ethnic and racial minority groups, and most are poor. Their neighborhoods are likely to be segregated and beset with multiple problems—inadequate health, social, cultural services; insufficient employment opportunities; crime; drugs; and gang activity. Their families are likely to suffer the stresses of poverty and to worry about their children's safety and about their future (p. 1).

Of course, these correlations are not absolute determinants of student outcomes in school. Schools can and have succeeded in educating students from backgrounds like these. However, for schools and districts, awareness of social influences on student learning can be a starting point for addressing inequitable educational outcomes.

Benard (1996) identifies four traits demonstrated by resilient individuals:

1. *Social competence*, which consists of the ability to establish positive relationships and the flexibility to successfully function within and between the primary and dominant cultures
2. *Problem-solving skills*, which include the ability to plan and think critically, creatively, and reflectively about solutions to cognitive and social problems
3. *Autonomy*, or the sense of one's own identity and independence
4. *A sense of purpose and future*, including having goals, educational aspirations, achievement motivation, persistence, optimism, and spiritual connectedness

The major tenet of this approach is that all individuals have the capacity to develop these resilience strengths and that resilience is a capacity for healthy development and successful learning innate to all people. It is an inborn developmental wisdom that naturally motivates individuals to meet their human needs for love, belonging, respect, identity, power, mastery, challenge, and meaning. When young people experience home, school, and community environments rich in the developmental supports (also called external assets or protective factors) of caring relationships, high expectations, and opportunities for meaningful participation and contribution, they meet these developmental needs. In turn, youth naturally develop the individual characteristics (internal assets, or resilience strengths) that define healthy development and successful learning.

The characteristics mentioned above include social competence, problem solving, autonomy and identity, and sense of purpose and future. Such individual strengths are the natural developmental outcomes for youth who experience homes, schools, communities, and peer groups rich in the three basic developmental supports and opportunities. Moreover, these individual characteristics promote successful learning and protect against involvement in health-risk behaviors such as alcohol, tobacco, other drug abuse, and violence (Resnick et al., 1997). According to Benard, research on human development, brain and cognition, school effectiveness, family and community, and medicine clearly indicates the benefits of an environmental approach over an individual, skill-building approach, commonly referred to as a deficit or "fix-the-kid" model.

Education and prevention practices that do not pay attention to external assets—the quality of relationships, messages, and opportunities for participation—do not improve learning or behavior in the long term. Such practices are in contrast to environmental change approaches like cooperative learning, small group process, adventure learning, arts experience, peer helping, mentoring, and service learning. These latter approaches create opportunities in the context of relationships for young people; they allow them to achieve academically and learn positive life skills and attitudes through direct and ongoing experiences that meet their developmental needs for love, belonging, respect, identity, power, mastery, challenge, and meaning. Figure 19 presents Benard's model of resiliency. Figure 20 spells out what is meant by the four resilience strengths she identifies. The following definitions relevant to Figures 19 and 20 below are based on Benard (2004, pp. 22–33).

Instructions to Participants

Consider the graphic representation of student resiliency in Figure 19, below. Figure 20 clarifies the meaning of each outcome in column three of Figure 19. Discuss with another participant how resiliency factors (in-school and beyond) can be capitalized on and developed in the school setting to meet the needs in column one. If you are not currently in an educational setting, think of a community with which you are familiar and note external protective factors outside the school. How can either of these (in-school or out-of-school) be expanded? Be as concrete and specific as possible. Use Figure 21 to take notes so you can share your ideas with the group. Be prepared to respond to the discussion questions at the end of the activity.

Figure19: Youth Development Process: Resiliency in Action

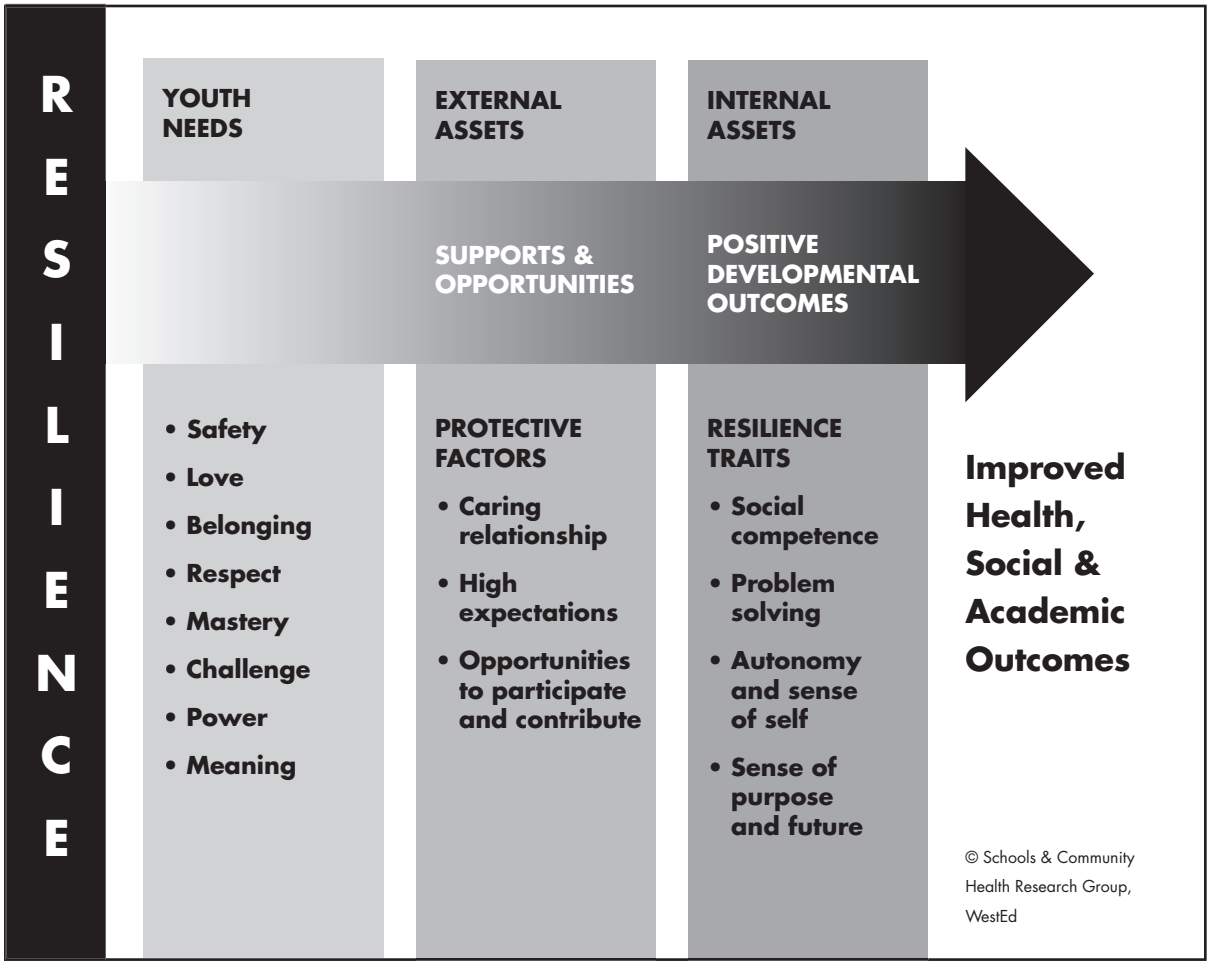


Figure 20: Components of the Four Resilience Strengths

Social Competence	Problem Solving	Autonomy	Sense of Purpose
Responsiveness Communication Empathy Caring Compassion Altruism Forgiveness	Planning Flexibility Resourcefulness Critical Thinking Insight	Positive Identity Internal Locus of Control Initiative Self Efficacy Mastery Adaptive Distancing Resistance Self Awareness Mindfulness Humor	Goal Direction Achievement Motivation Educational Aspirations Special Interest Creativity Imagination Optimism Hope Faith Spirituality Sense of Meaning

(Benard, 2004, p.14)

Figure 21: Increasing Resilience Factors

Social Competence	Problem Solving	Autonomy	Sense of Purpose

Discussion

- **What are existing ways the schools or communities with which you are familiar support youth resilience?**
- **What new ways did you identify for supporting resilience?**

Internal Locus of Control/Initiative
The belief that one has personal power, the ability to influence performance on a task or a life outcome, for example; initiative is the ability to act on this belief to seek a challenging goal (see also *agency*).

Adaptive Distancing/Resistance
Detaching oneself emotionally from dysfunction in the family, school, or community and imagining a different future for oneself from what one sees in the dysfunctional setting; resistance is a form of adaptive distancing; the refusal to accept negative characterizations or expectations of oneself based on one's racial, cultural, ethnic, gender identity or socioeconomic status.

Self Awareness/Mindfulness
Consciousness of one's inner states and ability to put them in perspective; ability to tap inner strengths and accept one's mistakes and limits.

Faith/Spirituality/Sense of Meaning
Ability to attribute meaning to life or create meaning and through that process find a sense of purpose in life.

Rutter (1987) reminds us that for students coping with situations that place them at risk of school failure, effective intervention promotes positive self-concepts by providing caring and supportive environments, communicating high expectations, and connecting learning to future opportunities. Prevention efforts need to focus on building networks and intersystem linkages. Educators must build social bonds within families, schools, and communities by providing and identifying resources (e.g., with agencies and community organizations) to ensure that all individuals experience caring and support. Educators can further strengthen social bonds by relating to students and families with respect and high expectations and by giving them opportunities to be active participants in their family, school, and community life (Wang, Haertel, & Walberg, 1998). Again, knowledge of students' cultures will allow educators to interact more knowledgeably with parents and students.

C. Resources

Print Materials

The School Community Journal
Published twice yearly, this journal is focused on topics related to the community of the school, including how the school relates to the wider community it serves. The journal presents research, essays, and reports from the field (including descriptions of programs).

Benard, B. (2003). Turnaround teachers and schools. In B. Williams (Ed.), *Closing the achievement gap: A vision for changing beliefs and practices, 2nd Edition* (pp. 115–137). Alexandria, VA: Association for Supervision and Curriculum Development.
Benard talks explicitly about school practices that promote high achievement of students from non-dominant communities. Two checklists are included that can be useful to schools who want to self-evaluate their level of expectations and caring.

Benard, B. (2004). *Resiliency: What we have learned*. San Francisco: WestEd.
Benard discusses recent findings of resiliency research and presents many examples to illustrate each important point. The book is well-referenced, readable, and highly appropriate for educators.

Boethel, M. (2003). *Diversity: School, family, & community connections. Annual Synthesis 2003*. Austin, TX: National Center for Family & Community Connections with Schools. Southwest Educational Development Laboratory.
This is a scholarly synthesis of research that can be used to guide educators to the most promising avenues for connecting school, family, and community. The book is organized so that a reader can find any topic of interest easily and quickly get a handle on the most important findings of research that meets high standards.

Casebook: *Preparing educators to involve families: From theory to practice*. Cambridge, MA: Harvard Family Research Project.
This new (2005) book has been prepared by the Harvard Family Research Project (HFRP) and is designed to help educators to partner with families of children in elementary school, particularly those for whom poverty and cultural differences are salient.

Moll, L. C. (Ed.). (1990). *Vygotsky and education: Instructional implications and applications of sociohistorical psychology*. Cambridge, England: Cambridge University Press.
This edited volume devoted to Vygotskian theory and applications is divided into three major sections: Historical and Theoretical Issues, Educational Implications, and Educational Applications. It offers a thorough grounding in sociohistorical psychology balanced with research related to classroom applications of Vygotskian principles. This is a valuable resource for educators who wish to explore sociohistorical psychology on both a theoretical and a practical level.

Valdés, G. (1996). *Con respeto*. New York: Teachers College Press.
Valdés has written a thorough and engaging ethnography of 10 immigrant Mexican families in Carpinteria, California, and their experiences with the local public schools. Her vivid documentation highlights communication issues and how immigrant families from a particular background negotiate life in a new setting.

Web sites

The Harvard Family Research Project
http://www.gse.harvard.edu/hfrp

HFRP has a network that anyone can subscribe to called Family Involvement Network in Education (FINE). FINE disseminates summaries of research studies related to families and schooling conducted at the HFRP. These are reader-friendly and very useful to teachers, researchers, and others involved with education who want research-based ideas for working with families and communities to improve schooling. FINE focuses primarily on underserved students and families.

The National Center for Family & Community Connections with Schools
http://www.sedl.org/connections

Based at Southwest Educational Development Laboratory in Austin, TX, the Center bridges research and practice—linking people with researched-based information and information that they can use to connect schools, families, and communities.

Project Zero
http://pzweb.harvard.edu/Default.htm

Project Zero, a research group at the Harvard Graduate School of Education, investigates the development of learning processes in children, adults, and organizations. Project Zero builds on this research to initiate communities of reflective, independent learners; to contribute to deep understanding within academic disciplines; and to promote critical and creative thinking. Project Zero's mission is "to understand and enhance learning, thinking, and creativity in the arts and other disciplines for individuals and institutions." Of particular interest to educators are the current and recent research projects conducted by Project Zero staff, including the seminal work on multiple intelligences by Howard Gardner.

Resiliency in Action
http://www.resiliency.com

This Web site, founded by Bonnie Benard and Nan Henderson, disseminates resiliency research, offers concrete information about how to facilitate the application and evaluation of the resiliency paradigm, and is engaged in building a network of practitioners in different states. The site includes an interactive forum, training information, product information, and additional resources.

The Yale Child Study Center School Development Program
http://info.med.yale.edu/comer

This Web site features educational reformer James Comer's school change model, which is grounded in the idea that healthy child development is the key to academic achievement and life success. Comer's framework identifies six developmental pathways: physical, cognitive, psychological, language, social, and ethical.



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