References/Resources for Confronting Convention

TIDES Instructor Companion
http://www.ecs.csun.edu/tides/instructorcompanion.html

Students at the Center
http://www.studentsatthecenter.org/sites/scl.dl-dev.com/files/Motivation%20Engagement%20Student%20Voice_0.pdf

Why Diversity Matters
http://www.mckinsey.com/business-functions/organization/our-insights/why-diversity-matters

Understanding Student and Faculty Incivility
http://uncw.edu/cte/et/articles/Vol12_1/Knepp.html

Five Characteristics of Learner-Centered Teaching
http://www.facultyfocus.com/articles/effective-teaching-strategies/five-characteristics-of-learner-centered-teaching/

LINKS to Belgrad Engaged Learning Tools

TOOLS FOR AUTHENTIC ASSESSMENT

THE COOPERATIVE CLASSROOM

TOOLS OF COOPERATIVE LEARNING

WEB-BASED TOOLS

An Annotated Bibliography Addressing Issues of Diversity in Curriculum Materials and Teacher Education

David McLaughlin (MSU), James Gallagher (MSU), Mary Heitzman (UM), Shawn Stevens (UM), and Su Swarat (NU)

Barab, S. A., & Luehmann, A. L. (2003). Building sustainable science curriculum: Acknowledging and accommodating local adaptation. *Science Education, 87*(4), 454-567.

Developing and supporting the implementation of project-based, technology-rich science curriculum that is consistent with international calls for a new approach to science education while at the same time meeting the everyday needs of classroom teachers is a core challenge facing science educators. In this article, the authors discuss the challenges of scaling out university-developed, project-based curricula. In the authors' thinking, the process of dissemination is not simply rubber-stamping the same program into multiple contexts; rather, the process of large-scale adoption involves additional, individual teacher-directed design, fitting, and adaptation for local circumstances.

Bartolome, L. I. (1994). Beyond the methods fetish: Toward a humanizing pedagogy. *Harvard Educational Review, 64*(2), 173-194.

The author argues that the current focus on finding the right "methods" to improve the academic achievement of students who have historically been oppressed hides the less visible but more important reasons for their performance: the asymmetrical power relations of society that are reproduced in the schools, and the deficit view of minority students that school personnel uncritically, and often unknowingly, hold. A humanizing pedagogy that respects and uses the reality, history, and perspectives of students as an integral part of educational practice is advocated. The author also emphasizes the need for teachers' evolving political awareness of their relationship with students as knowers and active participants in their own learning.

Bryan, L. A., & Atwater, M.M. (2002). Teacher beliefs and cultural models: A challenge for science teacher preparation programs. *Science Education, 86*(6), 821-839.

An argument is presented for developing science and teacher education programs that examine teachers' beliefs about multicultural issues and their impact on science teaching and learning. Research shows that knowing teachers' beliefs and designing instruction and experiences to explicitly confront those beliefs facilitates refinement of and/or transformation of beliefs and practices. The authors determine that preservice teachers need to be culturally sensitive teachers and that science educators need to continue to identify those beliefs and practices that undergird desirable and equitable science instruction.

Demmert, W. G., & Towner, J. C. (2003). *A review of the research literature on the influences of culturally based education on the academic performance of Native American students* [ED 474128]. Portland, OR: Northwest Regional Educational Laboratory.

This review collects, reports on, and critically analyzes the research literature to determine whether a culturally based education (CBE) curriculum improves the school performance of American Indian, Alaska Native, and Native Hawaiian students. The authors found only one project that provided insights on how researchers might show a direct connection between CBE and improved academic performance.

Driver, R., Asoko, H., Leach, J., Mortimer, E., & Scott, P. (1994). Constructing scientific knowledge in the classroom. *Educational Researcher, 23*(7), 5-12.

Informed by a view of scientific knowledge as socially constructed and by a perspective on the learning of science as knowledge construction involving both social and individual processes, this article presents a theoretical perspective on teaching and learning science in the social setting of classroom. The authors illustrate how personal and social perspectives on learning, as well as perspectives on the nature of the scientific knowledge to be learned, are necessary in interpreting science learning in formal settings.

Gandara, P., & Contreras, F. (2010). The Latino Education Crisis: The Consequences of Failed Social Policies: Harvard University Press.

Drawing on both demographic data and case studies, this book reveals the depths of the educational crisis looming for Latino students, the nation‘s largest and most rapidly growing minority group. It describes the cumulative disadvantages faced by too many children in the complex American school systems, where one in five students is Latino. Many live in poor and dangerous neighborhoods, attend impoverished and underachieving schools, and are raised by parents who speak little English and are the least educated of any ethnic group. The volume describes the effects for the families, the community, and the nation of Latino children being behind

Gay, G. (2000). *Culturally Responsive Teaching: Theory, Research, and Practice*. New York, NY: Teachers College Press.

The author makes a case for using culturally responsive teaching to improve the school performance of underachieving students of color. Combining insights from multicultural education theory, research, and classroom practice, the author demonstrate that African, Asian, Latino, and Native American students will perform better, on multiple measures of achievement, when teaching is filtered through their own cultural experiences and frames of reference. Key components of culturally responsive teaching discussed include teacher caring, teacher attitudes and expectations, formal and informal multicultural curriculum, culturally informed classroom discourse, and cultural congruity in teaching and learning strategies.

Hodson, D. (1999). Going beyond cultural pluralism: Science education for sociopolitical action. *Science Education, 83*(6), 775-796.

Some guiding principles of antiracist education are combined with Vygotskian notions of education as enculturation in order to produce a set of proposals for a radical form of multicultural science education for sociopolitical action. Major educational goals include: raising participation and attainment levels in science for students from ethnic minority groups; and sensitizing all students to racism, and other forms of discrimination and oppression, in science and technology, science education, and contemporary society. This article outlines a radical form of curriculum development, involving the politicization of teachers, as the only effective way of implementing such a curriculum.

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

This book integrates scholarly research with stories of eight successful teachers in a predominantly African American school district. Ladson-Billings advocates for culturally relevant teaching as a means to improve the academic achievement of African American students. Three critical aspects of culturally relevant teaching are emphasized: teachers' conception of themselves and others, the manner which classroom social interactions are structured, and teachers' conception of knowledge. In helping students to develop necessary skills, the author recognizes excellence as a complex standard which takes into account diversity and individual differences.

Ladson-Billings, G. (1999). Preparing teachers for diverse student populations: A critical race theory perspective. *Review of Research in Education, 24*, 211-247.

The author reviews the literatures of diversity and teacher education and reframes the notions of preparing teachers for teaching diverse learners so that the "improbability" of such a task in public schools can be understood. The article begins by discussing critical race theory (CRT) and then looks at how diversity is constructed in education. A look at the work of some notable scholars and exemplary programs from a CRT perspective concludes the article.

Lee, O. (2003). Equity for linguistically and culturally diverse students in science education: A research agenda. *Teachers College Record, 105*(3), 465-489.

This author provides a synthesis of major issues and research findings for effective classroom practices in the multicultural science education literature. Recommendations are also offered for a research agenda that contributes to achieving the goal of science for all, including students from diverse languages and cultures.

McGee Banks, C. A., & Banks, J. A. (1995). Equity pedagogy: An essential component of multicultural education. *Theory into Practice, 34*(3), 152-158.

Equity pedagogy is seen as one of five dimensions of multicultural education. The concept of equity pedagogy and it intersection with the other four dimensions of multicultural education is explored. The authors also describe characteristics that are needed by teachers to actualize equity pedagogy in the classroom.

Solano-Flores, G., & Nelson-Barber, S. (2001). On the cultural validity of science assessments. *Journal of Research in Science Teaching, 38*(5), 553-573.
Contending that current approaches to handling student diversity in assessment are limited and lack sociocultural perspective, a concept of cultural validity as a form of test validity in science assessment is proposed. The authors find that attaining cultural validity may conflict with current basic principles and assumptions in testing, such as item independence and standardization. The article discusses the ways in which adopting cultural validity as a criterion for test validity makes it necessary to adopt new procedures for assessment development.

Strike, K. A., & Posner, G. J. (1992). A revisionist theory of conceptual change. In R. A. Duschl & R. J. Hamilton (Eds.), *Philosophy of Science, Cognitive Psychology, and Educational Theory and Practice* (pp. 147-176). Albany NY: State University of New York Press.
The authors restate and revise their previously published theory of conceptual change. They conclude that motives and goals need to be taken into account in attempting to describe a learner's conceptual ecology and that current scientific conceptions and misconceptions are parts of a learners' conceptual ecology which must be seen in interaction with other components. The authors advocate for developmental and interactionist views of conceptual ecologies.

Warren, B., Ballenger, C., Ogonowski, M., Rosebery, A., & Hudicourt-Barnes, J. (2001). Rethinking diversity in learning science: The logic of everyday sense-making. *Journal of Research in Science Teaching, 38*(5), 529-552.
The article discusses the two dominant perspectives on the relationship between everyday and scientific knowledge and ways of knowing. One views the relationship as fundamentally discontinuous and the other views the relationship as fundamentally continuous. The authors locate their work within the latter tradition and propose a framework for understanding the everyday sense-making practices of students from diverse communities as an intellectual resource in science learning and teaching.

Yazzie, T. (1999). Culturally appropriate curriculum: A research based rationale. In K. Siwsher & J. Tippeconnic (Eds.), *Next steps: Research and practice to advance Indian education* (pp. 83-106). Charleston, WV: ERIC/CRESS. (ED 427 906).
Culturally appropriate curriculum are viewed as those materials that link traditional or cultural knowledge originating in Native home life and community to the curriculum of the school. This chapter examines theoretical and practical research studies that support and inform the development of culturally appropriate curriculum for American Indian children in K-12 classrooms.