

SERC Library: Topical Literature Search

Classroom Management: Culturally and Linguistically Responsive Science Instruction March 2018

This resource guide includes research and other recent informative articles pulled from literature and the Library's educational database service for schools, programs, service providers and families to share best practice ideas for establishing and managing a classroom environment in culturally responsive ways that promote science achievement for all students through instructional practices that are relevant, meaningful, and build on each learner's strengths. It should be noted that it does not represent the full scope of resources and information available on this topic nor serve as an endorsement of a particular resource.

Introductory Article:

Engaging Culturally and Linguistically Diverse Students in Learning Science

Lee, O., & Buxton, C. (2011). Engaging Culturally and Linguistically Diverse Students in Learning Science. *Theory Into Practice*, 50(4), 277-284.

How to engage culturally and linguistically diverse students in learning science is a relatively new field of study. Researchers have begun to address this question using a range of theoretical perspectives, including: (a) a cognitively based perspective, (b) a cross-cultural perspective, and (c) a sociopolitical perspective. Although proponents of these perspectives share the belief that connecting students' cultural and linguistic experiences to the practices of science is central to student engagement, the specific approaches proposed to best achieve this goal differ.

The authors of this article explain each perspective using examples from representative research programs and discuss the unique ways that each perspective addresses the challenge of providing engaging and equitable learning opportunities for culturally and linguistically diverse students in science classrooms. They offer implications for instructional strategies that teachers can use to make their classrooms more engaging and equitable science learning environments for diverse student groups.

To learn more:

<http://search.ebscohost.com/login.aspx?direct=true&db=pbh&AN=66645586&site=eds-live&scope=site>

For access to additional educational resources available through the SERC Library from its electronic journal database service and topical research LibGuides as well as in-person from the various instructional, assessment and other collections, please consider becoming a Library member. Membership is free and you can join online by following the link provided below.

<http://www.ctserc.org/index.php/library/library-about/library-membership>

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List of Sources:

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Links to Information

Constructing Cultural Relevance in Science: A Case Study of Two Elementary Teachers

<http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=34712660&site=eds-live&scope=site>

Culturally Relevant Pedagogy in a Diverse Urban Classroom

<http://search.ebscohost.com/login.aspx?direct=true&db=pbh&AN=58041293&site=eds-live&scope=site>

Culturally Relevant Teaching in Science Classrooms: Addressing Academic Achievement, Cultural Competence, and Critical Consciousness

<http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=62640362&site=eds-live&scope=site>

Investigating Strategies for Enhancing Achievement for Urban African American Students in Middle School Science Classroom

<http://search.ebscohost.com/login.aspx?direct=true&db=edo&AN=95652354&site=eds-live&scope=site>

Negotiating cultural differences in urban science education: an overview of teacher's first-hand experience reflection of cogen journey

<http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=94492927&site=eds-live&scope=site>

Reflections on Success and Retention in Urban Science Education: Voices of Five African-American Science Teachers Who Stayed

<http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ915551&site=eds-live&scope=site>

Science for ELLs: Rethinking Our Approach

<http://search.ebscohost.com/login.aspx?direct=true&db=sch&AN=24285851&site=eds-live&scope=site>

Synergistic Strategies

<http://search.ebscohost.com/login.aspx?direct=true&db=sch&AN=66900850&site=eds-live&scope=site>

Teaching science as a cultural way of knowing: merging authentic inquiry, nature of science, and multicultural strategies

<http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=66305036&site=eds-live&scope=site>

The development of a model of culturally responsive science and mathematics teaching

<http://search.ebscohost.com/login.aspx?direct=true&db=edb&AN=91842101&site=eds-live&scope=site>

The Knowledge and Practices of High School Science Teachers in Pursuit of Cultural Responsiveness

<http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=120232620&site=eds-live&scope=site>

Urban Elementary Teachers' Perspectives on Teaching Science to English Language Learners

<http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=41429159&site=eds-live&scope=site>

Using critical race theory to analyze science teachers culturally responsive practices

<http://search.ebscohost.com/login.aspx?direct=true&db=edb&AN=74751489&site=eds-live&scope=site>