Introduction to Special Issue on Culturally Relevant Technology-Based Learning Environments

Roberto Joseph  
Hofstra University

Kevin Clark  
George Mason University

Guest Editors

This special issue on culturally relevant technology-based learning explores the impact and inclusion of culture in the design and development of learning environments that utilize technology. Twelve years ago, *ET* published a special section on “diversity and educational technology.” This issue provides an updated examination of why it is important to incorporate culture when designing technology-based learning environments.

As our schools are becoming more diverse, our methods for designing instructional products are not meeting the needs of this growing diverse population of students. Some minorities still lag behind on almost every important educational achievement indicator. There is a growing body of research in the field of teacher education which focuses on culturally relevant pedagogy. This research shows great promise in helping to close the achievement gap.

The authors in this special issue provide strategies for how we might approach the design of culturally relevant technology-based learning products. They represent a variety of cultural and ethnic backgrounds, and focus on different forms of educational technology applications.

This is by no means an exhaustive representation, but this special issue does raise many of the pertinent issues related to the inclusion of culture in technology-based learning environments.

The Authors in This Issue

Diane Anoyi Igoche and Robert Maribe Branch begin this special issue by grounding the conversation on the ways cultural values can become assets throughout the instructional design and development process. The authors present assumptions and strategies for incorporating cultural values throughout the process.

Rona Frederick, Jamel K. Donnor, and Lesbell Hatley present a brief literature review highlighting examples of culturally responsive uses of computer technology. The article includes a discussion of a relatively new field of study, ethnomcomputing. The authors summarize their findings from the literature review and offer the reader some recommendations regarding the design and development of culturally responsive technology environments. It should be noted that this is the first of two articles that specifically utilize the concept of culturally responsive pedagogy.

Deepak Prem Subramony analyzes the complex relationships that cultural minority learners have with education and technology. Over the past several years, the author has conducted an ethnographic study and collected data across the United States. Subramony explains that there are key sociocultural phenomena uniquely valuable as lenses through which to interpret the roles of education and technology in the lives and aspirations of cultural minority learners.

Leslie D. Hall and James Mountain Chief Sanderville share their design journey to save Native-American traditional knowledge, cultures, and languages through a collaborative effort to design an authentic video game. The goal of the project was to create a prototype video game for reviving an indigenous language and culture of the Sugpiaq Alutiiq people of Nanwalek, Alaska.

Pao-Nan Chou and Wei-Fan Chen remind us that the number of international students who take online courses in the U.S. is growing, and it is becoming more important to understand how these online minority groups learn in Western-designed online educational settings. The authors present a case description on how to apply the acculturation approach to online teaching practice.

Tel Amiel, Josh Squires, and Michael Orey use learning objects to provide a framework to think
about localizing educational content. Their article provides a fresh perspective on the main issues surrounding localization. The authors present a framework for thinking about localization that includes four design strategies, two of which globalize local learners and two that localize global resources. The authors then discuss the practical strengths and drawbacks of each perspective.

Kimberly A. Scott, Gregory Aist, and Denice Ward Hood describe an after-school program, CompuGirls, that encourages youth to design for diversity. This is the second article in this special issue that utilizes the concept of culturally responsive pedagogy. In this article, the authors describe the CompuGirls curriculum as well as provide student examples of how they have integrated culturally responsive pedagogy and social justice with computing.

Kevin Clark, Jami Brandt, Rhonda Hopkins, and Jason Wilhelm worked in an after-school program primarily with African-American and Latino children in the Washington, DC area to develop sports-themed digital game prototypes. They describe how they worked with the students in a participatory design process to engage students in stages of discovery, evaluation, and prototyping. The students assumed roles as users, testers, informants, and design partners.

Roberto Joseph closes this special issue by reminding us of the most significant educational problem of our time—the achievement gap. He provides the reader with background on the significance of incorporating culture throughout the design of technology-based learning environments. He then discusses the need for the field of educational technology to join in the social movement to close the achievement gap.

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**Incorporating Cultural Values into the ADDIE Approach to Instructional Design**

**Diane Anoyi Igoche**

**Robert Marihe Branch**

*The University of Georgia*

This article discusses treating cultural values as assets in the instructional design and development process. The selected ideas are based on educational technology frameworks that have successfully facilitated culturally pluralistic teaching and learning processes during the last decade. The topics bound by these ideas are consistent with a generic ADDIE approach to instructional design. Further, the ideas promote a positive correlation between the values held by an individual and those held by the learning community to which that individual may belong.

**Introduction**

Incorporating cultural values into the instructional design and development process can become an asset to the instructional designer and the learner audience. It is important to recognize learning as a cultural process. Culture, within this context, is regarded "as the epistemology, philosophy, observed traditions, and patterns of action by individuals and human groups" (Branch, 1997, p. 38). The variety of ideas, life experiences, traditions, and beliefs of a learner audience...