

Controversy in Science Museums: Re-imagining Exhibition Spaces and Practices

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Abstract

Increasingly, science museums and science centres are developing exhibitions that are provocative and often controversial in nature, as they cut across issues involving science, technology, society, environment, and politics. Installations centering on climate change, wildlife conservation, GMOs, reproductive technologies and nanotechnologies are but a few examples of complex issues that are changing the landscape of these institutions. Embedded within the political and social trappings of the day, these contemporary installations encourage different kinds of visitor experiences and interactions. They are inherently challenging for institutions to create and host, and they pose compelling questions about the nature and purpose of science and science museums. Drawing upon international case studies of controversial exhibitions, I will discuss the changing landscape of science museums and the role and nature of controversy.

Erminia Pedretti is Professor of Science Education at the Ontario Institute for Studies in Education (OISE) at the University of Toronto. She is a former Director of the Centre for Science, Mathematics and Technology Education located in the Department of Curriculum, Teaching and Learning, and teaches in the initial teacher education and graduate programs. Her research focuses on science education in school and non-school settings, environmental education, and teaching and learning about science, technology, society and environment (STSE). She has published over 45 articles, 5 books and 2 teacher education textbooks. Her current funded research project *Engaging the Public with Controversial Exhibitions at Science Museums* explores, through a series of case studies, controversial and/or issues-based exhibitions and the interface between science communication and visitor engagement.

Integrating Science, Mathematics, Engineering and Technology: Critical Perspectives on the STEM Education Movement

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Abstract

Over the past decade or more, the STEM movement has infiltrated the world of education without a lot of serious analysis about what it actually means. In this presentation, I draw on my own research and recent contributions to the *Canadian Journal of Science, Mathematics and Technology* to examine some of the practical, philosophical, sociological and political issues surrounding the STEM movement. I look at *who* are the groups that speak in favor of an integrated STEM curriculum, *what* interests do they support, *why* do they favor such an approach, and *how* structuring curriculum in this way reinforces the beliefs and support of those who constructed it.

John Wallace is a Professor at the Ontario Institute for Studies in Education (OISE), University of Toronto with a career in education that includes work in classrooms, schools and school systems. His teaching and research interests include science teaching, teacher learning, teacher knowledge, curriculum integration and qualitative inquiry. He is Editor-in-Chief of the *Canadian Journal of Science, Mathematics and Technology Education*. John's most recent co-authored/edited books include *Knowledge That Counts in a Global Community: Exploring the Contribution of Integrated Curriculum* (Routledge, 2012) and *Integrating science, technology, engineering and mathematics: Issues, reflections and ways forward* (Routledge, 2012).