Chapter 5.4
Culturally Responsive Games and Simulations

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ABSTRACT

Electronic games and simulations are powerful learning tools for many learners; yet, the learning environments in these games and simulations frequently represent knowledge and experiences from a single dominant culture perspective—a white, middle to upper class perspective. This chapter introduces the reader to the connection between culture and learning and using culturally responsive teaching strategies as a method of expanding the effectiveness of electronic games and simulations to all learners. Readers are exposed to major tenets of culturally responsive instruction and how specific instructional strategies that embrace these principles can effectively be incorporated into educational games and simulations. Suggestions for future development of electronic games and simulations are also presented along with ideas for research regarding the effectiveness of culturally responsive teaching strategies in electronic games and simulations.

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INTRODUCTION

It was dusk and my family was driving over the Congress Avenue Bridge in Austin, Texas. The Congress Avenue Bridge houses the largest urban colony of Mexican Free-Tail bats in the United States, an estimated 1.5 million of them, and they come out at dusk each night to go hunting. It is an exciting and amazing experience for locals and tourists alike. We were excited to have my niece

Katie, who was 3 at the time, experience this incredible sight. Her father excitedly exclaimed, "Katie, look at all the bats. They live underneath the bridge and are going to look for food." Katie stopped playing with her doll, looked out the window, and then responded, "Bats fly using echolocation." We all sat in stunned silence. How did this 3 year old know about echolocation? Her father recovered first and stated, "That's right Katie. How did you know that?" Katie nonchalantly picked up her doll, began playing again and said, "Oh, it was on my Animal Adventures game" (A CD of games from JumpStart: http://www.knowledgeadventure.com/jumpstart/). To Katie, this was merely a computer game she played and happened to learn a fact that impressed the adults. However, for educators, instructional designers, and programmers, stories like this inspire us to consider the many learning opportunities available when electronic games and simulations are integrated into the numerous learning environments, both informal and formal, learners encounter on a daily basis.

Previous research and the numerous research studies and examples presented in this handbook document effective teaching and learning can take place with learners of all ages when simulations and electronic games actively engage them in learning experiences (Gee, 2004; Papert, 1998; Rieber, 1996). Nevertheless, the needed prior learning experiences and knowledge expected in these kinds of encounters are often reflective of what is considered appropriate school ready experiences from a single dominant culture perspective—that being a white, middle to upper class perspective (Bennett, 1986). Some learners are inadvertently left out of the electronic learning environment because their experiences, interests, and culture are so different than that encountered in the gaming environment. Therefore, there is a need to advance the field in ways to reach learners in new ways. How can we increase the effectiveness of electronic gaming with all learners? How can we use simulations and electronic games to address different learning styles or preferences? How can learners' prior background and knowledge experiences, culture, language, and other factors that influence learning be infused into electronic gaming and simulation learning spaces? Although there are many ways in which to address these questions, this chapter will take the stance of considering learning with simulations and electronic games from a socio-cultural foundation. Vygotsky (1962, 1978, 1987, 1997) emphasized the importance of society and culture in learning; hence, his theory is often referred to as learning and development from a socio-cultural perspective. This chapter will explore the concept of culturally responsive teaching from a socio-cultural teaching stance with respect to learning with simulations and electronic games. Specifically, this chapter will:

- Offer a foundation for the relationship between culture and learning;
- Provide an in-depth description of culturally responsive teaching;
- Propose a rationale for the importance of culturally responsive teaching in simulations and electronic games;
- Present strategies to implement a culturally responsive teaching stance into electronic simulations and games; and
- Recommend suggestions for future research and development in integrating a culturally responsive teaching mindset and instructional strategies into simulations and electronic games.

CULTURE AND LEARNING

There are many ideas about learning in terms of defining the construct, determining how the learning process happens, the importance of the context in which learning occurs, and how learning might be measured. Some researchers examine developmental or cognitive issues as-