

Chapter 5

Affordances and Constraints of Scaffolded Learning in a Virtual World for Young Children

Rebecca W. Black

University of California, Irvine, USA

Stephanie M. Reich

University of California, Irvine, USA

ABSTRACT

In recent years there has been a marked increase in the number of virtual worlds aimed at populations between the ages of 6 to 14 years. This article examines the content and design of one such site, Webkinz World, as a sociocultural context for informal learning. Focusing on the design and activities of this site sheds light on the ways in which Webkinz World supports learning, especially for nascent users, and the apparent limits of these support structures as users gain more expertise.

INTRODUCTION

The term learning often conjures up images of structured lessons in which children are guided through activities by the expertise of a teacher or a knowledgeable adult in a formal context such as a classroom. In recent years, however, increasing attention has been paid to the role of informal contexts in children's learning and development. Due to their massive user bases and widespread

popularity, video games and virtual worlds are being recognized as important informal spaces that may influence young people's learning and developmental trajectories. For instance, researchers have examined how game-based activities may align with school-based skills, such as sophisticated learning and literacy practices (Apperley, 2010; Gee, 2003; Salen, 2007; Steinkuehler, 2007), collaborative problem solving (Squire, 2005), informal scientific reasoning (Steinkuehler

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& Duncan, in press), and informal science learning (Fields & Kafai, 2009; Kafai, 2008; Kafai & Giang, 2007).

The majority of the aforementioned research has focused on games targeting adolescents and adults; however, of late, there has been a veritable boom in the arena of virtual worlds for elementary school aged children. Sites such as *Webkinz World*, *Club Penguin*, *Barbie Girls*, and *Poptropica* are wildly popular, with registered user bases that number in the millions (Compete, Inc., 2009). In spite of the sheer numbers of children who frequent such spaces, there is very little research on the kinds of activities and learning that children are engaging with in such spaces. Some exceptions include Marsh's (2008, 2010) ongoing work exploring how virtual worlds such as *Club Penguin* and *Barbie Girls* may impact young children's learning, literacy, and digital literacy development, and how online spaces may allow children to experiment with different social roles (Marsh, 2010) through their play. Merchant (2009) also studies the use of immersive 3D spaces in classrooms and describes how "innovative digital literacy practices such as those involved in virtual world game play can easily disrupt classroom routines and call into question deeply held assumptions about literacy, literacy instruction and even the teacher-pupil relationship that lies at the heart of the educational process" (p. 39). However, these studies do not explicitly address the process of learning, especially the affordances of these virtual sites for supporting and cultivating knowledge. In other words, little is known about the design features and structures of these popular virtual worlds that enable children to move from novice to mastery in both the goals of the sites as well as the available content.

This article addresses this gap in the research by providing an examination of the content and design of the site, *Webkinz World*, as a context for informal learning. In particular, we examine how the game is designed in ways that both support and hinder children's learning. By focusing on

the design and activities of this site, this study explores the ways in which *Webkinz World* can support learning, especially for nascent users, and the apparent limits of these structures as users gain more expertise.

SOCIOCULTURAL THEORY AND SCAFFOLDED LEARNING

This article is grounded in a sociocultural perspective that stresses the centrality of social and cultural resources to processes of thinking and learning. Sociocultural theory posits that a child's mental functioning emerges from the manipulation of cultural material and development of psychological tools (Karpov & Bransford, 1995). This includes play that is mediated by tools and artifacts, as well as symbolic systems such as language. From this perspective, a space such as *Webkinz World* may serve multiple roles in children's learning. For instance, the computer provides the sociocultural context for activity and interaction as well as many of the cultural artifacts and tools that are used in such activities. In addition, the computer also serves as the more capable or expert other that structures learning experiences within the virtual world. Thus, the design of such environments plays a significant role in shaping children's learning experiences therein.

According to sociocultural theorists, children learn a great deal from the "appropriation of modes of speaking, acting, and thinking that are first encountered in collaboration with adults or more capable peers" (Minick, Stone, & Forman, 1993, p. 5). This type of supported learning is often discussed in terms of scaffolded learning or learning within the zone of proximal development (Vygotsky, 1978). According to Vygotsky (1978, p. 86), the ZPD "is the distance between the actual developmental level" of a child "as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance,

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