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Constructing fun: self-determination and learning at an afterschool design lab

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Abstract

The authors interpret the interactions at an afterschool and summer learning lab for children in grades 2 through 8. Combining an examination of the activities in a videotaped 2-h segment of an afternoon class with reflective commentary by the lead author/teacher, the authors present student and teacher behavior within its particular social context. Through an analysis of student, teacher, and artifact interactions, the authors find that self-determination is essential to the construction of fun and learning in the afterschool program. © 2000 Published by Elsevier Science Ltd. All rights reserved.

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1. Introduction

> Both the desire and the capacity to learn are present in all of us, and both are difficult (though not impossible) to extinguish. Both grow, take shape, and continually reinforce one another through the action of the many seen and unseen hands that will touch us, move us, guide us, challenge us, and protect us for as long as we live. The desire to learn is reshaped continuously as brain and hand vitalize one another, and the capacity to learn grows continuously as we fashion our own personal laboratory for making things. (Wilson, 1998, p. 295)

This paper is about the seen and unseen hands that shape the participants' experience at Odyssey Center for Education, an afterschool and summer program. As students and teacher construct their own learning while building, designing, and

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playing with a variety of tools, they shape individual and communal enjoyment of that experience. In examining videotaped student–student, student–teacher, and student–artifact interactions, we found evidence of rich relationships supporting the idea that self-determination is a crucial factor in the construction of fun and learning at Odyssey Center.

2. Description of Odyssey Center for Education

The lead author teaches at Odyssey Center for Education in Champaign, IL, a private afterschool and summer program he created 7 years ago for children in grades 2 through 8. Inspired by its Winnetka, IL, predecessor, Nova Center for Education, the mission of Odyssey is to provide an environment where children can use inspiring and appropriate materials to design, build, and learn in meaningful and enjoyable ways. During the academic year, the classes are 90 min long and meet once a week, with a group of students attending a particular class for 6 weeks. During the summer, Odyssey offers Monday through Friday sessions, with 2 h 45 min sessions each day. In addition, the class size increases from an academic year average of about four, to five or six students. Many students during the academic year and the summer session take consecutive sessions, resulting in a fairly stable student population and a high degree of familiarity among the students. Second-graders are sometimes in the same class with eighth-graders, if Dean feels comfortable doing that with particular students, but most children find themselves with classmates who differ in age by no more than 2 or 3 years. Although all-girl classes during the academic year and summer have increased the participation of girls in the program, the majority of students are male. Also, despite efforts to increase diversity, including scholarship and outreach efforts, the majority of the students are from middle-to-high socioeconomic status white families.

Students at Odyssey work primarily with Lego/Logo, a combination of special Lego materials, including lights, sensors, and motors, that can be connected to computers for robotic control with the Logo programming language. During their tenure at Odyssey, which for many children spans 3 or more years, many children choose to take a short break from Lego or Logo and focus instead on different computing applications, such as spreadsheets and Web applications. Many students also take advantage of the non-computing options available to them, including conducting science experiments, dismantling everyday objects such as CD players and VCRs, or using the musical synthesizer and sampler. Thus, the range of activities at Odyssey is quite broad.

3. Methodology

This paper examines the experience of one student, Rebecca, during 2 h of a summer class at Odyssey. We decided to focus in detail on one segment to offer a rich episode of interaction that could be interpreted through our own experience,