

Chapter 7

Emergent/See: Viewing Adolescents' Video Game Creation through an Emergent Framework

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ABSTRACT

In the fall of 2006 the authors' ethnographic research study began in a response to increasing social concern regarding adolescent (dis)engagement in school literacy practices. The authors began data collection in a grade 9/10 Information Technology (IT) class wherein students were in the process of creating their own videogames as a way to learn programming. Through observations and interviews with students, teachers and parents, they have begun to consider how knowledge developed through creating video games informs the way young people see and engage in the world. They introduce emergence theory to illuminate how their understandings and skills can be used to provide more meaningful learning experiences in formal learning/school experiences. This chapter will demonstrate how these students were engaged in a powerful, emergent learning experience, and one that is very different to the traditional Eurocentric schooling approach, one often not recognized or understood as credible learning.

INTRODUCTION

Emerge: c. 1563, from Latin *emergere*, “rise out or up,” from *ex-* “out” + *mergere* “to dip, sink”. The notion is of rising from a liquid by virtue of

buoyancy. *Emergency* “unforeseen occurrence”. *Emergent* (adj.) was first recorded c.1450.¹

It is the fall of 2006, and we are observing a grade nine Information Technology (IT) class in action. The students are in the process of creating their own videogames as a way to learn programming, and as we observe we begin to notice

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engagement and learning in this space that is very different from the conventional Eurocentric high school classroom we are used to as teachers and researchers. Imagine the following scenario if you will:

The lab is bustling. Students are seated--sort of--searching through a variety of windows open on their computers. Fingers click and clack keys, and there are murmurs of "Oh! I just died!" and calls from across the room: "Sam²! I just figured it out!" Some students get up and peer over the shoulder at a friend's computer. Where is the teacher? He is working one-on-one with a student and there is a list on the board where students may sign up if they would like some guidance from the teacher, but otherwise they are on their own. Alone, that is, with their friends, the internet, software tutorials and 'cheats', blog and wiki sites, game forums, YouTube and of course, their past experiences with technology and/or gaming. As written in a previous analysis, we found that this environment is a highly social and cooperative one wherein the "relationships develop to become more fluid, organic interconnections, where the students and teacher are both learning and guiding each other" (Sanford, Madill, Ticknor & Spencer; under review). The students approach problem solving in a multiplicity of ways (Squire, 2008) and realize that their expertise is developing in order to make them more capable. One student, Sam, is immersed, working through a problem and we are surprised that he has yet to ask for help from the teacher: "Ok, never during this time have you raised your hand for help," we say. Sam replies: "No, I don't know if the teacher could figure it out anyway. Might be able to, but I want to figure it out myself 'cause what am I going to learn if I just let him do it." The students are all working at different paces and timelines, on different steps and problems, and on different projects of their own choice but with the same software. They are engaged, immersed, and are both teachers

and learners in not only their individual learning process, but also the collective learning and knowledge acquisition of the class.

The engagement, social connectivity and motivation to learn in the above scenario does not represent the majority of high school classrooms in North America that still value and practice Eurocentric conventional schooling. Gee and Levine (2009) claim that schools are not meeting the learning needs of students who are deeply engaged in learning outside of school using technological advances like the ones the IT students were accessing in order to develop their games. Gee and Levine suggest that both teachers and students "witness a disconnect between the real world outside their classrooms and the contrived, dated world that exists within" (p. 51). Further, Shaffer, Halverson, Squire, and Gee (2005) remind us of this when they compare the internal motivation of students in the classroom and in the gaming world:

Whereas schools largely sequester students from one another and from the outside worlds, games bring players together, competitively and cooperatively, into the virtual world of the game and the social communities of game players. In schools, students largely work along with school-sanctioned materials; avid gamers seek out news sites, read and write FAQ's, participate in discussion forums, and most important, become critical consumers of information (p. 5).

This present research was developed through concern for, and in response to, this disconnect present in the lives of teachers and students in school life.

In developing our research questions we felt it integral that, as Gee and Levine (2009) suggest, "[a] crucial first step in promoting student engagement is to rethink literacy for the 21st century" (p. 49). This research sought to better understand the skills (particularly relating to literacy and learning

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