Chapter 5.11

The Haunted School on Horror Hill:
A Case Study of Interactive Fiction in an Elementary Classroom

Kevin Kee
Brock University, Ontario

Tamara Vaughan
The Western Quebec School Board, Canada

Shawn Graham
Grand Canyon University, USA

ABSTRACT

As gaming technology for personal computers has advanced over the last two decades, the text-adventures that predominated in the 1980s ceased to be commercially viable. However, the easy availability of powerful authoring systems developed by enthusiasts and distributed free over the Internet has led to a renaissance in text-adventures, now called "Interactive Fiction." The educational potential in playing these text-based games and simulations was recognised when they were first popular; the new authoring systems now allow educators to explore the educational potential of *creating* these works. The authors present here a case-study using the ADRIFT authoring system to create a work of interactive fiction in a split grade 4/5 class (9 and 10 year-olds) in Quebec. They find that the process of creating the game helped improve literary and social skills amongst the students.

INTRODUCTION

Advocates for so-called "serious games"[1], computer games that are played for purposes other than fun have made the case that computer gaming presents a novel way for students to learn (Chen and Michael, 2005). Not only do these games engage multiple learning styles (visual, auditory, kinaesthetic, and reading), but they also set the student up to participate in multiple cycles of "cognitive disequilibrium", in which the student

forms a hypothesis (i.e., "what happens if…"), tests it, and revises (i.e., "oops, I lost the game when I did that – better try something else!") (cf. Van Eck, 2006, p. 20).

We present here a case study in which we employed a specific genre of computer gaming ("interactive fiction" or "text adventure") in an experiment to see whether it could enhance the literacy skills of students in a grade 4/5 split class (9 – 10 year olds). Text-adventure games were prominent in the 1980s, a time when computer graphics hardware and software were rather rudimentary. In this case study, the students created a text-adventure game and played it with younger students. The creation and playing of the game had enormous positive benefits for increased literacy skill. It also had the pleasant side effect of fostering class unity and improving the social skills of the students as they worked together to create the game.

We found five major benefits to incorporating interactive fiction in this classroom:

1. It increases student engagement with the lesson.
2. It meets the needs of various learning styles or "multiple intelligences".
3. It provides opportunities for students to become leaders in the classroom.
4. It allows all learners to contribute and experience success
5. It allows students to take ownership of their learning.

It is important to note here that we did not simply load a work of interactive fiction onto a school"s computer lab computers and say, "Go play". The role of the teacher in using interactive fiction is crucial. To understand the benefits and possibilities of using interactive fiction in the classroom, we must first understand what interactive fiction, and its predecessor, the text-adventure, is.

THE PREHISTORY OF COMPUTER GAMES

Text-adventure computer games had their origins in the 1975 main-frame computer game *Colossal Cave* (Montfort, 2003, p. 85-93), also known as *Adventure*. *Colossal Cave* was a room-by-room description of a cave system near the author's home in Kentucky. In its earliest forms, a player could only move through the rooms using the cardinal directions, or by typing "up" or "down". It was not so much a game as a *simulation* of a particular environment, albeit one described in text. When *Colossal Cave* began to be widely distributed, other programmers added characters into it. The ability to pick up or use particular objects, in particular ways, was added. Perhaps the earliest non-player character to gain fame in the computer gaming world was the "Thief", who would follow the player around, occasionally pick-pocketing items from the player, just when the player needed them most.

As text adventures grew more complex and more popular, they became increasingly sophisticated. They could accept a wider vocabulary of words, and syntax that was more complicated. The computer "parser", the interface between the player and the world being simulated, also grew more sophisticated in its interactions with the player. Typing "go north and get the hammer" might be met with the response "I can't go north, and anyway, what do you want with a hammer?". Notice the "I". In the game, other non-player characters always interacted with "you": "The thief tells you, 'I only need a few more coins and I can retire!' But when the player tried to do something that the game did not allow, this omnipresent "I" would come to the fore. It was as if the parser was a kind of homunculus in the player's head, at least when the player was embodied in the world. This shifting viewpoint within the fiction, though complex, is a useful jumping-off point for discussing point-of-view and narrative structure in fiction more generally, because it confronts the

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