Journal of Unschooling and Alternative Learning 2012 Vol. 6 Issue 12.

THE BOY WHO LEARNED TO READ THROUGH SUSTAINED VIDEO GAME PLAY: CONSIDERING SYSTEMIC RESISTANCE TO THE USE OF 'NEW TEXTS' IN THE CLASSROOM

By: Rochelle SKOGEN

Abstract

Various studies have discussed the pedagogical potential of video game play in the classroom but resistance to such texts remains high. The study presented here discusses the case study of one young boy who, having failed to learn to read in the public school system was able to learn in a private Sudbury model school where video games were not only allowed but considered important learning tools. Findings suggest that the incorporation of such new texts in today's public schools have the potential to motivate and enhance the learning of children.

Introduction

Acknowledging video game play as acceptable 'text' in schools reflects work being done by literacy researchers studying popular culture and media, who are attempting to understand how texts that reside outside the traditional print form can serve as resources to students (Buckhingham &-Green, 1994; Chandler-Olcott & Mahar, 2003; Charsky & Mims, 2008; Dyson, 1997; Gee, 2003a, 2003b, 2005; New London Group, 2000; Owston *et al.*, 2009; Prensky, 2000; Squire, 2003; Squire & Jenkins, 2003; Wolfe, 2001). Ranker (2006) for instance, building on the work of Buckingham & Sefton-Green (1999) and Luke (1999) states that "when students read or write from within a story genre informed by popular media, the conventions that govern those media can be valuable instructional resources" (p. 32). He goes

ISSN:1916-8128

on to note that in particular "allowing students to [read] video games or other popular cultural interests is a way of making the curriculum more "permeable" (a word coined by Dyson, 1997) so that school-valued and home and community-valued narratives might intermingle" (Ranker, 2006, p. 24). In regards to children with learning disabilities, Ranker also believes that video games as text may be "one way to include the interests of marginalized or struggling students, so that they might begin to use what they know, as they [read] at school (2006, p. 24). The study presented in this article was an exploration of whether it might in fact be true that video game play can help struggling students learn to read. The findings suggest that it is the motivational force of video games that can have the greatest impact on slow to learn readers.

Difficulties with conducting this type of study

Even though the studies mentioned in the first section of this article do point to the efficacy of video game play in learning to read, it is difficult to evaluate their actual impact since in reality these games are still rarely used in today's classrooms. There are many reasons for this lack of use, but one that seems most pervasive is that adults "commonly blame video games for encouraging violence" (Lister *et al,* 2003, p. 263) in children and in society as a whole. These beliefs are hard to change even though studies such as Buckingham's (1996) have shown "that youth are particularly good at separating fact from fiction in popular media, and have noted that video games, while perhaps contributing to a very small percentage of violent crimes, cannot be the scapegoat in a violent society with complex causes for its violence" (in Ranker, 2006, p. 30-31). Another reason for the resistance to the use of video games as reading material in classrooms, is of course the long tradition of print-based texts in schools which has allowed very little in the way of questioning "whether one type of narrative is necessarily more valuable than another and what the implications of these questions might be for reading

teachers who are not necessarily familiar with [other] genres" (p. 31). Noted video game researcher James Gee notes that:

> …even if we had the world's best educational games produced and ready for the shelves, it's not clear that most educators or schools would know what to do with them. While the majority of students play video games, the majority of teachers do not. Games, perhaps for their anti-authoritarian aesthetics and inherently anti-Puritanical values, can be seen as challenging to institutional education. Even if we strip aside the blood and guts that characterize some video games, the reality is that as a form, games encourage exploration, personalized meaning-making, individual expression, and playful experimentation with social boundaries—all of which cut against-the-grain of the social mores valued in school. In other words, even if we sanitize games, the theories of learning embedded in them run counter to the current social organization of schooling. (Shaffer *et al.,* 2004, p. 16)

The virtual absence of such new texts in today's classrooms of course poses a dilemma for literacy researchers who wish to study the efficacy of video games in the context of learning to read. How can we study this phenomenon, if there are no classroom sites that permit the use of such games? Therefore while in theory it might seem reasonable to believe that these games could have a positive impact on learning to read, demonstrating it is another thing. Thankfully I was able to access a very special school site where video game play was not only allowed but acknowledged as a useful tool in learning. At this privately run school, modeled on the Sudbury educational philosophy, I met an 11 year old boy and his mother who admitted that he, Aaron (pseudonym), had come to this school because he had failed to learn to read in the regular schools he had attended and consequently had been bullied and teased mercilessly. While his mother had placed her son in the new school to protect what little self-

esteem he had left, and had no expectations that he would improve academically there (as the school is without any kind of standardized curriculum or formal teaching per se), all were astounded when in a fairly short period of time, he did learn to read.

Research design

This article presents a qualitative descriptive interpretive case study (Ellis, 1997) of Aaron, an eleven year old boy, who failed to learn to read in his public school classrooms (even with the help of teacher's aides, and pull out reading instruction over the years), and who explains how he learned to read through the sustained play of video games at the private school he attended. As Stake (1995) has indicated, "the case c[an] be a child. It c[an] be a classroom of children or a particular mobilization of professionals to study a childhood condition" (p. 2). The specific aims of this study then were to understand 1) this struggling reader and the developmental disorder responsible for his difficulties, 2) how this boy explained learning to read in such a short time at his school and why he believed he was unable to do so in his regular school, and finally, 3) how his experiences partially support researchers' claim that video games are valuable resources in classrooms, while also revealing the unlikelihood of schools using them in ways that would actually allow students to overcome reading difficulties. Methodologically, the case study is situated within a naturalistic paradigm, which allowed for themes and conclusions to emerge from the particular situations under study (Lincoln & Guba, 2000). Three interviews of approximately one hour each were conducted with Aaron, as well as with his mother (who gave background data that Aaron himself could not provide). The interviews also had a participant observation dimension also, as Aaron explained and showed how he read the video game on the computer. Selective interview data are shared here in order to demonstrate how Aaron was able to reflect on his own learning and progress in regards to reading. First person accounts by young students like Aaron are fairly rare. While the study showed how sustained video game play can help to motivate

slow to learn readers like Aaron, perhaps just as importantly it raised the question of how such children may not be well served by a system that, regardless of inclusive education policies, remains grounded in standardization, which tends to encourage the use of more traditional print based texts (for instance storybooks, short stories and novels) in the teaching of reading. The need to question such long held beliefs is addressed at the end of the paper.

Aaron and his challenges

According to his mother Aaron was diagnosed with Developmental Coordination Disorder (DCD) when he was 3 years old. Most are not familiar with this condition, including teachers who have students with such exceptionalities in their classrooms. According to the Diagnostic and Statistical Manual of Mental Disorders or the DSM-IV as it is more commonly known (American Psychiatric Association, 2000), Developmental *Coordination Disorder* is an "idiopathic disorder…diagnosed in children who, for no medical reason, fail to acquire adequate motor skills" (in Zoia *et al*, 2006, p. 613). What was once called, "clumsy child syndrome" might easily lead people to believe that DCD is not especially debilitating, since many children are 'clumsy' and simply outgrow it. Today researchers agree that the word 'clumsy' does not adequately represent the condition now identified as Developmental Coordination Disorder. Barnett & Henderson (2005), for instance, have indicated that it is a 'marked impairment' which "has a significant, negative impact on activities of daily living, such as dressing, eating, riding a bicycle, and/or on academic achievements" (p. 170). Zoia et al., (2006) have noted that "DCD is not a trivial disorder as it affects around 5% of school-aged children, with a prevalence of boys over girls (3:1)" (p. 613). In Aaron's case his mother indicated that he "has never been able to tie his shoelaces, ride a bicycle (even a tricycle), eat with a knife and fork or do up buttons" (interview transcript). And like "some children with DCD [Aaron] demonstrate[s] expressive speech problems"

(PsychNet-UK, 2006) meaning that he has difficulty pronouncing words and has a limited vocabulary especially in the area of imaginative and affective language. He also displays the secondary characteristic of 'difficulty of social acceptance' (Green et al., 2006) and poor peer relations.

Academically, Aaron has had great difficulty learning to read and write. The likelihood that children with DCD will also experience learning difficulties especially in the area of literacy has been well documented (Green, Baird & Sudgen, 2006; Kaplan *et al*, 1998; Kaplan *et al*, 2001). For instance, while investigating a non-referred group of children with DCD, Kaplan and colleagues found that 50% of these children also qualified for at least two [other] diagnoses: reading disorder, ADHD, oppositional defiant disorder and conduct and/or emotional disorder (Green et al., 2006, p. 743). At age 7 it became obvious to all that Aaron was not going to learn to read easily. While he could recognize some letters of the alphabet, he could not remember them in any kind of order and was not able to sound them out. Although Aaron's mother is thankful that he has not shown any symptoms of ADHD or oppositional defiant disorder she knows that ironically, in Alberta at least, he may have 'coded' higher and gotten more help if he had been a behaviour problem. And although being quiet and 'good' are usually positive things, his mother believed that in Aaron's case his docile and easy nature allowed him to develop certain strategies whereby he could virtually disappear from the teacher's gaze and pretend that he understood much more than he actually did, as a way of pushing attention away from himself and away from his disability.

But perhaps even more worrisome than his speech and reading difficulties for Aaron's mother was what might happen to him later on in life. Unfortunately, DCD has been linked to later psychiatric problems (Zoia et al., 2006, p. 613) of which his mother was well aware. Kamps (2006) for instance notes that "research shows that over time, the child's difficulties with motor skills may result in withdrawal, anxiety, and/or other social/emotional difficulties" (n.p.). Hellgren *et al.,* (1994) have also

observed “an increased risk of negative psychiatric outcome at age 16 in children who had shown deficits of motor control and perception in earlier childhood” (p. 1255). Green et al., stated in their 2006 study that, “a significant proportion of children with DCD…were reported by their parents to be at risk of psychopathology” (p. 743), which appears to support Kadesjö & Gillberg (1999) who “found a high comorbid relationship between ADHD, DCD with an interactive effect linked to social difficulties consistent with a diagnosis of a social impairment” (p. 825). Green et al., (2006) have suggested that one contribution “to mental health problems [in those with DCD may be] the perceived competence and self-esteem of the child, [as] researchers have suggested that children with DCD have reduced perceptions of their abilities” (p. 747). These findings tend to reflect what one psychiatrist who was involved with Aaron’s early testing, explained to his mother. This doctor felt that as a small child Aaron likely would not suffer too much from bullying and teasing, as other children probably wouldn’t notice that he was different but that at adolescence he was at risk for this type of negative social behaviour from others, which could then put him at risk for depression and even the development of suicidal tendencies. In this sense, even though Aaron was in an ‘inclusive’ school system, the chances were good that he would experience some form of “exclusion within the inclusive school” (Kearny, 2008, p. 220) which is exactly what happened.

Aaron approximately 18 months ago

Aaron was 11 years old and still considered only barely literate. His mother had transferred him to a new public school the year before and had him repeat grade four, hoping that he might be able to “catch-up” by repeating. Aaron was once again given an I.P.P. (Individualized Program Plan or I.E.P - Individual Educational Program in the U.S.), the same as he had had since Kindergarten. He was again provided with a teacher’s aide and was pulled out for remedial reading instruction as he had been every

year since pre-school. This extra help consisted for the most part of phonetic and sounding out work. According to his mother, Aaron became increasingly frustrated throughout the school year as he was asked to read what he called "baby books" that were of no interest to someone his age. As Jardine *et al.*, (2006) have suggested, "with reading, many elementary schools end up having files full of little developmentally color-coded 'readers,' each of which has been specifically designed to developmentally follow the others, but none of which contains a story that is actually worth reading (p. 70). Not being able to read at his age became increasingly problematic for Aaron because in Alberta, as in Ontario

> the Ministry of Education has imposed a standardized curriculum which has a predominant focus on the literacy's of reading and writing. To succeed in [these] schools, one needs to become proficient at reading and writing at an early age. Unfortunately, not all learners develop basic literacy skills at the same rate or through the same experiences. Some students struggle with reading and/or writing tasks in school and often experience a great deal of frustration and failure with literacy related tasks. In many cases, these students become reluctant to participate in literacy activities that serve to perpetuate this sense of discomfort or failure. (Scott *et al.*, 2008, p. 35)

This certainly appears to have been the case with Aaron as his mother believes that all he learned that year was to thoroughly dislike reading. Like many students who suffer from such delays, he began to find [his] studies irrelevant, [his] teachers arbitrary, and [his] work excessive (Greenberg, *et al.*, 1992). By the end of that grade four year, not only was Aaron still testing at a mid-grade one level in reading but was now being called names like 'retard' as well as being physically threatened by some of the kids at his school. One frigidly cold morning, according to his mother, Aaron became so unhappy that 40 minutes after she believed he had gotten on the school bus, she found her son sobbing in the snow in

their front yard. She recalled: “It was then that I realized that he would rather freeze to death than go to school and I knew I had to do something drastic” (interview transcript).

The Sudbury School

What she did, and what some might consider drastic, was to enroll Aaron in a privately run Sudbury school. This school, modeled on Sudbury Valley School in Framingham, Massachusetts, founded 40 years ago in 1968 by Daniel Greenberg, promotes itself as a democratically based learning institution. Grounded in the twin notions of freedom and democratic governance, these schools are places where students “decide for themselves how to spend their days. Students of all ages determine what they will do, as well as when, how, and where they will do it” (http://www.sudval.org/). At the Sudbury school Aaron attended the basic beliefs there were:

- all people are curious by nature
- the most efficient, long-lasting and profound learning takes place when started and pursued by the learner
- all people are creative if they are allowed to develop their unique talents
- age-mixing among students promotes growth in all members of the group
- students who have a voice in decision-making demonstrate ownership of their experience and environment.

At the time of the study there were 42 full time students at the school – ranging from 4 to 18 years old. The school was in a large house, in a rural area, surrounded by fields, next to a farm where buffalo were being raised. The school had a music room, a large computer room, a weight training room, a toy room, an art and sewing room, a kitchen that was available to all students and a large living room where meetings were held. There was also a laundry room, an entertainment room with pool table and

television (not hooked up for regular TV. but used mostly for video games like Dance Dance Revolution). Students also had access to three trampolines in the yard (in the summer), a Quonset with swinging rope and trampolines (in the winter), a pond (for skating in the winter) and a shop where students welded and built different things. The school was open from 8am to 5pm everyday but students were only required to be there 25 hours a week. There were three adults on site, two who were certified teachers and the third who was in charge of the shop (i.e. welding, woodworking etc). The teachers did not teach in the traditional sense of the word, but rather talked with students in order to discover what their strengths and passions were and then tried to guide them toward the realization of their dreams. These of course took as many forms as there were students, for instance one First Nations' student was discovered to have artistic talents therefore he asked for paints, easel and paper in order to do what he loved. The school provided him with the materials and the space in which to paint and an Art Show was arranged where parents could bid on his paintings. A second example would be a young girl who loved horses. She was accompanied by an adult to a nearby farm in order to ask if she could help groom the horses there in exchange for free rides. An agreement was reached with the owner and the teacher agreed to transport the student there and back twice a week. The adults were also there to assure that the democratic process was being adhered to as well as supporting the various democratic structures such as voting on issues at Campus meetings or showing up before the Judicial committee for not acting in a *respectful, responsible or reasonable* way. But the adults were not there to force the students to learn anything at all in other words they could do as they pleased, i.e., they could sleep all day, play on computers all day, play video games all day, play outside all day and so on.

It is this "radical freedom" and lack of formal teaching at Sudbury schools that make them so controversial. How can children learn when there is no formal curriculum and no teacher at the front of the classroom teaching various subjects? As I have noted elsewhere (Skogen, 2010), what students learn

in these schools is how to be good citizens and what it means to live in a truly democratic environment. Due to the constraints of this type of paper, I cannot go further into the Sudbury philosophy but would encourage those who would like to know more to visit the Sudbury Valley homepage at http://www.sudval.org/ or consult the book *The Crisis in American Education* (2005) published by Sudbury Valley School Press.

I want to also make clear that in no way is the goal of this paper to 'sell' the idea of the Sudbury school or any other school for that matter. But since there are so few schools that allow for the sustained use of video games as educational resources, the Sudbury school was the perfect microcosm within which to study the impact of such games on the ability to learn to read. I will return briefly to the Sudbury model in my conclusion in order to link the findings of this paper with some of the Sudbury Valley's founder's own perceptions of the learning that happens in these schools.

Aaron's beginnings at the Sudbury School

When Aaron began attending the Sudbury School his mother noted that many there called him the "invisible boy" because he spent his days standing at the back of the computer room watching the others play but never participating himself. Over time though he began to make friends and started taking part more actively in the computer room as well as jumping on the trampolines outside. According to his mother this was an important development for Aaron since making and keeping friends had always been a challenge for him. And as he became a member of the group of boys who played video games in the computer room at school, he also began asking his mother to buy him games and game consoles so he could also play at home. Becoming part of this group of boys that I have called "tech kids" elsewhere (Skogen, 2010) appeared to be transitional for Aaron as he became an active member of this community of players. This reflects Squire & Jenkins (2003) and his colleagues' belief

that "games bring players together, competitively and cooperatively, into the virtual world of the game and the social community of game players" (p. 5).

Aaron's mother insists that neither she, nor the school did any type of reading with him during the year and a half prior to the beginning of this study, as she hoped this would reduce his negative feelings about reading. When I met first met Aaron's mother and she told me of Aaron's inability to read, I wondered how he could play video games so well if he couldn't read. His mother told me this had never occurred to her as she was quite unfamiliar with the video game genre (all she did was buy them for her kids she said). While she was against my doing any kind of "testing" of Aaron's ability, she did agree to let me interview him in regards to how he perceived his own reading ability and whether he himself felt that his skills had improved since being at his new school. I spoke with Aaron about this study and he agreed to the three interviews with me and to let me observe him playing his video game while his mother agreed to fill in any contextual information that I might need.

1st interview with Aaron

I began our first interview by asking Aaron some general questions about his experiences with reading:

Author: Do you feel that you read better now than you did when you were in regular school (1 year and 4 months ago)?

Aaron: Yes.

Author: How did this happen?

Aaron: Playing [video] games. Because the games I play you need to read.

Author: I wonder why you can read the video game words (facts/directions) but you were having difficulty reading in regular school?

Aaron: Too much pressure. They forced you to read books and stuff like textbooks. It was bad because they [the books] were too big. There was too much reading that wasn't interesting like legends and I didn't like to read in all those subjects.

Author: Your mother said that you didn't like reading the books the teacher sent home when you were in regular school? Can you tell me a little bit about that?

Aaron: It was boring. I had to read the same book over and over.

Author: Why is it different reading video games?

Aaron: Because they're pretty easy and more fun. Because you can read and it [the video game] tells you what the story is. You hear what the Bosses say as they're plotting to take over the world. They explain it better than regular books. There's more of a point, better storyline than in school books.

Reflections on the first interview

The sense of 'fun' of which Aaron speaks, may have to do with what Lister et al., (2003) have said about how game designers create a sense of immersion for players:

> Interactive, immersive texts, like video games, arguably leave more control over the narrative in the hands of the player or reader than do traditional texts… the player (or "reader") of a video game is responsible for making decisions along the way that affect the outcome of the narrative. Because of

> their qualities of interactivity and immersion, video games produce nonlinear narratives. (p. 387)

This sense of ‘fun’ may also be linked to the fact that “in a nonlinear text, there is no one set ‘pathway.’ Rather, the next step in the plot development depends upon the decisions made by the player in the previous moments of real-time play” (Ranker, 2006, p. 28). Gee (2005) has also explained the perceived challenge of video game playing as one where:

> game designers can make worlds where people can have meaningful new experiences, experiences that their places in life would never allow them to have or even experiences no human being has ever had before. These experiences have the potential to make people smarter and more thoughtful. (n. p.)

This ability to actively participate in the game seemed to give reading a purpose in Aaron’s eyes.

2nd interview with Aaron

Squire & Jenkins (2003) have noted that "like science fiction, [video] games promise to stimulate the imagination, spark curiosity, encourage discussion and debate, and enable experimentation and investigation (p. 10). Being someone who loves books, I too was interested as are Squire & Jenkins (2003) and Ranker (2006), in seeing whether or not Aaron's interest in video games might:

> overlap with forms of narrative more commonly introduced at school, such as the mythical worlds described in "high fantasy" narratives like C. S. Lewis's The Chronicles of Narnia or J. R. R. Tolkien's The Hobbit or The Lord of the Rings. Such texts often include maps, like [in video games], that are central to the plot. In addition, the magical, medieval worlds of high fantasy, supernatural powers and events, and epic battles of good and evil involving mythical creatures resonate strongly with these types of video games. (p. 30)

Therefore I asked him:

Author: I think a book like the Hobbit has a really interesting storyline. Do you think you would read the Hobbit on your own?

Aaron: Maybe.

Author: When?

Aaron: When I'm done the next two games.

Author: What's the name of the game you're playing now?

Aaron: Final Fantasy VII.

Author: Would you rather read the Hobbit or play this game?

Aaron: Play the game.

Author: Why?

Aaron: It's more fun.

Although Aaron was willing to consider the idea of reading a fantasy book that somewhat resembled the video game storyline, it is obvious that he prefers the video game genre to books. In the next part, I shifted modes by trying to determine what Aaron's actual reading ability was:

Author: Can you read all the words in your video games?

Aaron: Most of them...like 95%.

Author: What about the words you can't read? What do you do?

Aaron: I keep reading the rest and then I pretty much know what that word means.

Here, Aaron seems to be speaking of what Goodman (1974; 1986) and others like Routman & Butler (1988); Smith (1999) and Weaver (1980; 1988) have called the 'semantic' dimension of a reader's three-cueing system (consisting of semantic + syntactic + graphophonic dimensions). Accordingly, "semantic cues involve enlisting the meaning of what has just been read, that is the next (unknown) word should make sense in the context of the reader's ongoing interpretation of the text meaning" (Hempenstall, 2002, p. 44). It also seems to reflect the notion of "guessing from context where a reader uses prior knowledge of the subject and the ideas in the text as clues to the meanings of unknown words, instead of stopping to look them up" (The National Capital Language Resource Center, 2003, n. p.). As I watched Aaron play his game it was obvious that he did not 'decode' individual words and although he could read quite difficult words if I asked him to, he was able to seize the meaning of the sentence even when he did not always read the individual words quite correctly. This led me to ask him:

Author: Is there ever a time that not being able to read something in a game makes you give up?

Aaron: No. The only time I give up is when I can't beat the guy.

Author: But does that have anything to do with reading?

Aaron: No, it just means I'm not strong enough to beat that part. That's what I'm doing right now [*he shows me the game he is playing on his DS hand held game*]. I go back to training to become strong enough.

Author: Are there any games that might be too hard for you just because of the reading?

Aaron: Yeah… not that many. Yes some. I can read some words but just not enough.

Author: So do you imagine that in a year or so you'll have learned to read more and that will mean that you will be able to play those games you can't play now?

Aaron: Yes.

Author: How will you learn those new words?

Aaron: From other games. Seeing some of those words and learning them.

Here Aaron appears to be talking about the language in one game scaffolding his reading skills to a more difficult level. In the field of education of course the Vygotskyan concept of scaffolding consists of the teacher providing students with the needed support to extend their current skill and knowledge levels by finding ways of holding their interest and simplifying the tasks that are asked of them so that these become manageable (Hausfather, 1996). It also refers to the teacher checking for discrepancies between the student's efforts and the instructional goal in order to gauge frustration as well as the willingness of the student to risk (Ibid). Unbeknownst by Aaron of course, the notion of scaffolding is found in the gaming literature. According to Rosser (2008) intrinsic to good "games and simulations is

scaffolding which provides learners with cues, prompts, hints and partial solutions to keep them progressing through learning, until they are capable of directing and controlling their own learning path" (p. 124). Closely related, in the domain of cognitive science, is the notion of "the regime of competence principle, which results in a feeling of simultaneous pleasure and frustration - a sensation quite familiar to gamers" (Johnson, 2005) which Gee (2003b) explains in the following way,

> When kids play video games they experience a much more powerful form of learning than when they're in the classroom. . . . The secret of a video game as a teaching machine isn't its immersive 3-D graphics, but its underlying architecture. Each level dances around the outer limits of the player's abilities, seeking at every point to be hard enough to be just doable. (n.p.)

The Final Fantasy series is quite complex as far as video games go. It is story based and the vocabulary is quite advanced. For Aaron, it appeared that not only was the game providing intrinsic scaffolding that helped him to 'beat' the game if he tried hard enough, but that a concomitant scaffolding was also occurring at the level of his reading ability, especially with the more difficult and complex games that require a great deal of reading on the part of the player.

3rd interview with Aaron

Author: I see that you read very quickly. How do you know when you haven't read right?

Aaron: I just read it again. If it makes no sense then just read it again. Sometimes it's not important information. Like when the guys are talking to each other sometimes it's not important but sometimes it is.

Author: How do you know if it's important or not?

Aaron: I don't know, you just know.

Author: Do you read everything or do you skip?

Author: I skip.

Skimming and scanning are strategies that skilled readers use as it permits a "quick survey of the text in order to get the main idea, identify text structure, confirm or question predictions" (The National Capital Language Resource Center, 2003, n. p.). Aaron appeared to have learned to use contextual cues more so than he had tried to decode individual words on his journey to becoming literate through video game playing.

In the next part of the interview I wanted to better understand how video games had seemingly motivated Aaron to learn to read on his own.

Author: Why do you like video games?

Aaron: They're entertaining. It's like T.V. but you control the guy.

Author: But T.V. you don't have to do anything?

Aaron: Yeah you need to change the channel [*Ha! Ha!*].

Author: In school, your mom told me you didn't like to read, but in the game it doesn't bother you to read? How is it different?

Aaron: It isn't really. [*Here Aaron goes on to explain the game in detail to me. Because of the space constraints of this type of paper, I will not present this telling but rather will offer an analysis of his ability to 'story' the game]*.

As Aaron shared with me the general storyline of his video game, I was taken aback by his ability to use a wide range of cognitive skills, reminiscent of Bloom's taxonomy. Aaron was able to describe in great detail what was happening in the game which also involved restating in a logical sequence, so that I was able to understand what the game was about (it must be noted here that the very fact that Aaron is usually able to move through the levels of his games demonstrates not only that he understands the game but that he comprehends what he has read, otherwise he could not 'beat' the game). As he explained the video game to me, he was simultaneously showing me (illustrating) on his handheld DS, what or who he was talking about. And of course when he spoke of not being 'strong' enough and needing to go back to train more, he was being called to analyze the situation in order to determine what he needed to do next. In a very short period of time Aaron was able to succinctly explain the game in a way that I was able to make sense of (synthesis). Not unlike the young boy Ranker (2006) studied, Aaron appeared to be "developing a language for describing the strategic worlds and design of video games, much like a video game designer would" (n.p.). Also in being able to beat this game, Aaron showed not only that he was able to predict, assess and judge, the different aspects of the game in order to beat it, but that he was also able to judge the nature of the game (good/easy/hard etc) both of which represent an ability to evaluate.

For Aaron, it became obvious that learning to read was a by-product if you will, of playing video games. In other words, he did not consciously set out to learn to read while playing video games, but because his motivation to succeed at these games was so high, learning to read simply became an obstacle he needed to overcome, if he wanted to achieve the greater goal of 'beating the game'. In ending our last interview Aaron was unequivocal about the use of video games in the classroom:

Author: Why do you like beating games?

Aaron: The challenge.

Author: Do you think that regular schools should allow kids to play video games to learn to read?

Aaron: Yes.

Discussion

Rethinking definitions of reading proficiency

It is interesting to note that to this day Aaron still cannot recite the letters of the alphabet, the days of the week or the months of the year in any kind of order, but reads quite proficiently nonetheless. When he reads, although there are words in the sentence that he cannot decipher, as long as there are enough that he does recognize, he is able to make sense of the whole. While official definitions of reading proficiency are often grounded in the belief that "fluent readers are able to simultaneously decode and comprehend text" (Penner-Wilger, 2008, p. 1), Aaron's case suggests that educational stakeholders might want to revisit this type of blanket assumption since it gives the impression that there is only one right way to be a reader. As well according to this definition, Aaron, who has never 'decoded' in the usual way, would likely still be considered a failed reader even though he can now read any game that he plays (and if you have never read a video game then I am sure that like myself you will be surprised by the level of difficulty involved in reading most of these texts). While he was uninterested in novels or longer books Aaron was becoming more and more literate in the outside world, his mother said. He sometimes agreed to read Garfield books and Archie comic strips and sometimes even the latest Guinness Book of World Records. But it was the fact that he no longer 'hated' the idea of reading that made his mother happiest.

Why video game play may not succeed in the regular public school

When asked if she thinks Aaron would have learned to read had he stayed in regular school, Aaron's mother is adamant that he would not have. She believes that even if he had had access to video games in the classroom, he still may not have learned to read or it would have been a much slower process simply because there would not have been enough emphasis on the games themselves. She attributes Aaron's ultimate success in learning to read to three things which are not usually found in the regular classroom: 1) unlimited access to the reading materials he wanted to read (in this case video games) 2) unlimited practice time and 3) the desire to belong to a group of likeminded readers/gamers. Aaron judged that he spent on average 4 hours a day either sitting watching others play or playing video games himself at school. At home, he spent another 2 or 3 hours playing on his own. Therefore even if teachers decided to incorporate some video game play into their classrooms, it is unlikely that they would see results like Aaron's simply because students would not have access to the same amount of practice time. As his mother said:

> *I don't see how it could work. I mean with the way the schools are organized right now, what the children are playing a video game and then the bell rings and it's Social Studies period. Well the student who was playing a video game in Language Arts in order to learn to read, still can't read when L. A. is over but it's time to open the Social Studies book so forget the video game. This happened to Aaron you know. The teacher and her aide modified his Language Arts program but when it was Social Studies he was expected to read that book because there wasn't any other. It made no sense but it still happened. The real problem is that schools are not organized for the slow learner. A kid who can't read in grade five, needs to learn how to read first and foremost. Not to do Social Studies or Sciences. He needs to learn to read because he can't function in any of the subject areas without reading. So for those students, teachers need to find a way,*

> *anyway, and if it's video games that will do the trick well then that's what they should try. If it's comic books, or the Sears catalogue it should be tried. But you know schools just aren't made that way.* (Interview transcript)

In the end, Aaron's mother thought it all came down to finding something that would motivate Aaron enough to allow him to push past his intellectual and psychological challenges which had heretofore prevented him from learning to read. As she noted, "Aaron did not set out to learn to read. He only wanted to beat the games he was playing and to be part of a group of friends who liked the same things he did. Needing to learn to read was simply a by-product, something he had to do in order to attain his greater goal of winning at the games, like his friends could" (interview transcript). This seems to be what Gee means when he says that video games are intrinsically constructed to help the gamer "learn something long, hard, and complex and yet enjoy it" (Gee, 2005) which brings us to the issue of motivation and Rosser (2008) who found that good video games come with built-in "features that are highly motivating" in the sense that "game players continue to play games, *even after failure*, to get better at them" (*italics in original*, p. 124). Much of Aaron's mother's frustration came from the fact that few of his teachers would acknowledge that not only were their attempts to help not helping but that they were having a negative impact not only on her son's self-esteem but on his overall motivation to learn.

Conclusion

While it would have been wonderful to bring this paper full circle by concluding that yes, across the board, video games should be allowed in today's classrooms, the case study presented in this article revealed that this issue is not quite so black and white. While Aaron strongly believed that he learned to

read through the video game genre, and his mother admitted that adding these 'texts' to a teacher's instructional toolbox could be helpful, she also believed that they should not be seen as the magic panacea for struggling readers. Rather she felt that there was the need to question a system that allows public schools to continue to be structured in ways that too often prevent students like Aaron from reaching their full potential both as readers and as learners. These feelings are also echoed by Greenberg, founder of Sudbury Valley School, who has argued that:

> We [those working with children in the regular school system] sit our children down when they reach the age at which we think they should read, and force it down their throats. The result is that a lot of them come to hate reading, many never learn, and some 10-15% of them develop "reading disorders" such as dyslexia, for which they pay dearly — and we too pay ever so dearly with expensive reading therapists and remedial programs. (http://www.mountainlaurelsudbury.org/reading.asp)

In a system where many believe that techniques, strategies and specific resources are all that are needed to get children like Aaron to read, it may be hard for schools to question such practices and even harder for them to accept the following claim made by Greenberg:

> During the [40 or so] years that have elapsed since the school [Sudbury Valley] was founded, all the children learned how to read, but at widely different ages. Some learned at 4, others at 6, others at 8 or 9 or even later. By the time they were teenagers, you couldn't tell the difference between early readers and late readers. No one hated reading, all did it quite well, and there have been no observed functional disorders at all (http://www.mountainlaurelsudbury.org/reading.asp)

While this appears to be a radical statement, Greenberg believes that he has rarely encountered reading problems because children there are free to choose what most motivates them to want to learn and hence this high level of motivation is what allows them to persevere in that learning. Therefore what we can retain from this for the purpose of this article is that over and above the idea of allowing video games in the classroom likely lays the broader issue of motivation. It just so happens that in this day and age, video games happen to be highly motivating texts for many children. And if it is, as Christensen, Horn & Johnson (2008) have written, that motivation is "the true catalyzing ingredient…for learning" and that without motivation students "will [often] reject the rigor of…learning tasks [or] abandon [these] before achieving success" (p. 7), then all possible motivating "texts" need to be considered by teachers and be seen as having equal value in the classroom.

It is my hope that by sharing Aaron and his mother's story with educational stakeholders, researchers, teachers and parents, that they might consider "how games can provide powerful learning environments [which can potentially] go a long way toward shifting the current anti-gaming rhetoric" (Shaffer et al., 2004, p. 17). More research is needed to contest the structure of schooling which allows children to learn to "hate reading" rather than to discover the magic of the written word in all its manifestations.

Rochelle Skogen is an assistant professor of Education at Campus Saint-Jean, a French speaking institution at the University of Alberta in Edmonton Canada. Her research passions are those that deal with social justice issues of all kinds: Language equity, mental illness, learning difficulties, racism and curriculum studies.

Email: rochelle.skogen@ualberta.ca

References

American Psychiatric Association. (2000). Diagnostic and Statistical Manual of Mental Disorders, 4th Edition. Washington, DC, USA: APA; 886.

Barnett, A., & Henderson, S. E. (2005). Assessment of Handwriting in Children with Developmental Coordination Disorder (pp. 168-188). In D. A. Sugden & M. E. Chambers (Eds.), *Children with Developmental Coordination Disorder*. London, UK: Whurr Publishers.

Bloom's Taxonomy. Retrieved from: http://www.officeport.com/edu/blooms.htm

Buckingham, D. (1996). *Moving images: Understanding Children's Emotional Responses to Television*. Manchester, UK: Manchester University Press.

Buckingham, D. & Sefton-Green, J. (1994). *Cultural Studies Goes to School: Reading and teaching popular media.* London: Taylor and Francis.

Chandler-Olcott, K., & Mahar, D. (2003). Adolescents' Anime Inspired "Fanfictions:" An exploration of multiliteracies. *Journal of Adolescent and Adult Literacy, 46*(7), 556-566.

Charsky, D., & Mims, C. (2008). Integrating Off-the-Shelf Video Games into School Curriculums. *Tech Trends: Linking Research and Practice to Improve Learning, 52*(5), 38-44.

Christensen, C. M., Horn, M. B., & Curtis, W. J. (2008). *Disrupting Class: How disruptive innovation will change the way the world learns.* New York: McGraw Hill.

Dyson, A. H. (1997). *Writing Superheroes: Contemporary childhood, popular culture, and classroom literacy.* New York: Teachers' College Press.

Ellis, J. (1997). Workshop on Qualitative Research. *Conference papers*. Kingston, Jamaica. Federation of American Scientists. (2005). *Harnessing the power of video game learning.* Washington, DC: Summit on Educational Games. 1-53. Retrieved from: http://72.14.253.104/search?q=cache:f7sXXU33aJsJ:www.fas.org/gamesummit/Resources/Summit%2520on%2520Educational%2520Games.pdf+video+games+scaffolding+learning&hl=en&gl=ca&ct=clnk&cd=1

Gee, J. P. (2003a). *What Video Games Have to Teach us about Learning and Literacy*? New York: Palgrave Macmillan.

Gee, J. P. (2003b). "High Score Education: Games, not school, are teaching kids to think," *Wired, 11*(5). Retrieved from: http://www.wired.com/wired/archive/11.05/view.html?pg=1

Gee, J. P. (2005). Learning by Design: Good video games as learning machines. *E-Learning,* 2(1).

Retrieved from: http://www.academiccolab.org/resources/documents/Game%20Paper.pdf

Goodman, K. S. (1974). Effective Teachers of Reading Know Language and Children. *Elementary English, 51,* 823-838.

Goodman, K. S. (1986). *What's Whole in Whole Language?* Richmond Hill, ON: Scholastic.

Green, D., Baird, G., Sudgen, D. (2006). A Pilot Study of Psychopathology in Developmental Coordination Disorder. *Child: Care, Health, Development, 32*(6), 741-750.

Greenberg, D., Greenberg, H., Greenberg, M., Ransom, M., Sadofsky, M., & White, A. (1992). *The Sudbury Valley School Experience.* Framingham, MA: The Sudbury Valley Press.

Greenberg, D. (n.d.). Why Force Reading? Retrieved from: http://www.mountainlaurelsudbury.org/reading.asp

Hausfather, S. J., (1996) Vygotsky and Schooling: Creating a social context for learning. *Action in Teacher Education,* (18), 1-10.

Hellgren L., Gillberg I. C., Bagenholm A., Gillberg C. (1994). Children with Deficits in Attention, Motor Control and Perception (DAMP) Almost Grown Up: Psychiatric and personality disorders at age 16 years. *The Journal of Child Psychology and Psychiatry*, 35: 1255-1271.

Hempenstall, K. (2002). The Three-Cueing System: Help or hindrance? *Direct Instruction News*. 42-50. Retrieved from: http://www.adihome.org/phpshop/pdf/articles/DIN_02_02_10.pdf

Jardine, D., Friesen, S., & Clifford, P. (2006). *Curriculum in Abundance.* Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Johnson, S. (2005). Your Brain on Video Games: Could they actually be good for you? *Mind & Brain/Mental Health. July.* Retrieved from: http://discovermagazine.com/2005/jul/brain- on-video-games

Kadesjö B, Gillberg C. (1999). Development Coordination Disorder in Swedish 7-year old children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38(7), 820-828.

Kamps, P. (2006). An Overview of Dyspraxia. *Speechville Express.* Retrieved from: http://www.speechville.com/associated- disabilities/developmental-coordination-disorder.html

Kaplan, B., Wilson, B., Dewey, D., & Crawford, S. (1998). DCD May not be a Discrete Disorder. *Human Movement Science,* 17, 471–490.

Kaplan, B. Dewey, D. Crawford, S. & Wilson, B. (2001). The Term *Co-Morbidity* is of Questionable

Value in Reference to Developmental Disorders: Data and theory. *Journal of Learning Disabilities*, 34, 555–565.

Kearny, A. C. (2008). Exclusion at School: What is happening for students who are disabled? *The International Journal of Diversity in Organizations, Communities and Nations, 7*(6), 219-227.

Lincoln, Y. S., & Guba, E. G. (2000). Paradigmatic Controversies, Contradictions, and Emerging Confluences. In N. K. Denzin & Y. S. Lincoln, (Eds.), *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage, 163-188.

Lister, M., Dovey, J., Giddings, S., Grant, I., & Kelly, K. (2003). *New Media: A critical introduction*. London: Routledge.

Luke, C. (1999). Media and Cultural Studies in Australia. *Journal of Adolescent & Adult Literacy*, 42(8), 622-627.

New London Group. (2000). A Pedagogy of Multiliteracies: Designing social futures. In B. Cope & M. Kalantzis (Eds.), *Multiliteracies: Literacy learning and the design of social futures* (pp. 9–37). New York: Routledge.

Owston, R., Wideman, H., Ronda, N. S., Brown, C. (2009). Computer Game Development as a Literacy Activity. *Computers and Education, 53*(3), 977-989.

Penner-Wilger, M. (2008). *Building and Assessing Reading Fluency: Academy of reading with oral reading fluency.* Autoskill International, Inc. *Ottawa, Canada. Retrieved 11/10/09 from: http://www.autoskill.com/pdf/AutoSkill_ORF_alignment.pdf*

Prensky, M. (2000). *Digital Game-Based Learning.* New York, NY McGraw Hill.

PsychNet-UK. (2006). *Disorder Information Sheet: Developmental Coordination Disorder.* Retrieved from: http://www.psychnet- uk.com/dsmiv/developmental_coordination_disorder.htm

Ranker, J. (2006). "There's Fire Magic, Electric Magic, Ice Magic or Poison Magic": The world of video games and Adrian's compositions about *Gauntlet Legends. Language Arts, 84*(1), 21-33.

Rosser, J. B. (2008). *Playing to Win: A surgeon, scientist and parent examines the upside of video games.* Garden City, NY: Morgan James Publishing.

Routman, R., & Butler, A. (1988). *Transitions: From literature to literacy.* Portsmouth, NH: Heinemann Educational Books.

Scott, J., Parr, M., & Richardson, W. J. (2008). By Hook or by Crook: Engaging reluctant readers and writers through the use of technology and virtual field trips. *The International Journal of Diversity in Organisations, Communities & Nations, 8*(4), 35-42.

Sefton-Green, J. (Ed.). (1999). *Young People, Creativity, and New Technologies: The challenge of digital arts.* London: Routledge.

Shaffer, D. W., Squire, K. R., Halverson, R., & Gee, J. P. (2004). Video Games and the Future of Learning. Retrieved from: http://www.academiccolab.org/resources/gappspaper1.pdf

Skogen, R. (2010). The Missing Element to Achieving a Citizenship-as-Practice: Balancing freedom and responsibility in schools today. *Interchange, 41(1),* 17-43.

Smith, F. (1999). Why Systematic Phonics and Phonemic Awareness Instruction Constitute an Educational Hazard. *Language Arts, 77,* 150-155.

Squire, K, (2003). Video Games in Education. *International Journal of Intelligent Simulations and Gaming, 2*(1), 49-62. Retrieved from: http://website.education.wisc.edu/kdsquire/manuscripts/IJIS.doc

Squire, K., & Jenkins, H. (2003). Harnessing the Power of Games in Education. *Insight, 3*(1), 5-33. Retrieved from: http://website.education.wisc.edu/kdsquire/manuscripts/insight.pdf

Stake, R. E. (1995). *The Art of Case Study Research.* Thousand Oaks, CA: Sage Publications.

Sudbury Valley School. Homepage. Retrieved from: http://www.sudval.org/01_abou_01.html

Sudbury Valley School. (2005). *The Crisis in American Education: An analysis and a proposal.* Framingham, MA: Sudbury Valley Press. Retrieved from: http://www.sudval.org/05_onli_15.html

The National Capital Language Resource Center (NCLRC). (2003). *The Essentials of Language Teaching.* Washington, DC. Retrieved from: http://www.nclrc.org/essentials/reading/stratread.htm

Weaver, C. (1980). *Psycholinguistics and Reading.* Cambridge, NM: Winthrop.

Weaver, C. (1988). *Reading Process & Practice.* Portsmouth, NH: Heinemann Educational Books.

Wolfe, M. (Ed.). (2001). *The Medium of the Video Game.* Austin, TX: University of Texas Press.

Zoia, S., Barnett, A., Wilson, P. & Hills, E. (2006). Developmental Coordination Disorder: Current issues. *Child: Care, Health and Development.* 32(6), 613.