Virtual World for Cultural Exchange: An On-line Case Study

LLED 558: Literacy and Multimodality

Introduction

There are numerous case studies that examine student interaction and identity-making in virtual worlds, with the research articles collected in such books as edited by Mark Childs and Anna Peachey (2013) *Understanding Learning in Virtual Worlds* and Anna Peachey, Julia Gillen, Daniel Livingstone and Sarah Smith-Robbins (2010) *Researching Learning in Virtual Worlds*. A majority of these current articles examine how teachers are able to enhance classroom learning with Massively Multiplayer Online Role-Playing Games (MMORPG) like World of Warcraft or digital sandboxes like SecondLife. New Literacies scholar and sociolinguist James Paul Gee has for more than a decade been a major proponent of “good video games” (2003, p. 6) teaching children literacy and other social skills in contrast to traditional models of schooling (2004). This case study takes a closer look at multimodal theories from a decade further back in digital literacy history (Martin, 2006) when both virtual worlds and virtual reality were an exciting possibility for education. Using multiliteracies and figured world theoretical frameworks from the 1990’s, this case study will examine the learning possibilities and what has been achieved with the present decade’s proliferation of smartphones and other mobile gaming devices. The ubiquity of virtual gaming worlds has created a situation where children are no longer limited to classroom desktop interface for virtual worlds, or even specific rooms in their homes (Sefton-Green, 2013). My case study will examine a first grade student’s interactions with a mobile virtual world app, Majic Jungle Software’s The Blockheads, to determine how much a child can accomplish with and without guidance, and the cultural exchange that occurs between researcher and subject, mediated through an on-line environment.

Theoretical Framework

In their seminal article on multiliteracies, the New London Group’s (1996) write about the design elements of different modes for meaning that include audio, spatial, gestural and visual. Each of these modes seem to be crafted into Majic Jungle’s virtual world, as both visual and aural cues inform the player what needs to happen next in the game, while the smartphone’s gestural interface (swiping and tapping on the screen) helps the game’s avatar navigate the spatial world inside the game. The only element left out, according to the multiliteracies theory, is the linguistic design and this case study will partly consider the operating language of the game, English, as it is used by a native Japanese speaker who has some familiarity with spoken and written English. This case study will also reflect upon the individual theories of New Londoner Group members such as James Gee (2003. 2004), Gunther Kress (1997, Kress & van Leeuwen, 1996), Bill Cope and Mary Kalantzis (2009) in the analysis of the cultural exchange through the virtual world. The Blockheads game is a side-scrolling two-dimensional world that allows the player to move an avatar across, as well as digging into the ground and climbing up mountains, trees and ladders. The game play is similar to the widely popular Minecraft virtual world by Mojang game studio, with some key differences: Minecraft’s three-dimensional world allows players to explore in many different directions, while the Blockheads offers a single plane of activity yet presents fewer navigational challenges for new players. Minecraft also has a well-established international community of players, many of whom can meet in different multiplayer worlds (one, for instance, is modelled on the *Hunger Games* series) while the Blockheads’ multiplayer mode is limited to people in the same mobile service area. My original intention was to invite someone from a different continent to join me in exploring a multiplayer world, yet the single player mode offered my subject more privacy for this case study.

One final comparison between the two virtual world games concerns the avatar operated in the game. For Minecraft players, they can design almost every aspect of their avatar: gender, appearance and skill levels. With the Blockheads, players choose avatars from a random generator that only offers the player the choice between male and female and the ability to edit the avatar’s name in the selecting stage. Despite these limitations, the Blockhead game allows for more immediate entry into the virtual world, and has some connection to the second theoretical framework, established by Dorothy Holland, William Lachicotte Jr., Debra Skinner and Carole Cain (1998) with their research into figured worlds. Like other notions of virtual world in the same decade that focus on narrative elements (Ryan, 1991; Murray, 1997), they consider the cultural impact of the virtual, described as “a space and time established imaginatively” (Holland *et al.*, 1998, p. 53) in what the authors term a figured world. They draw upon sociohistorical theories of Lev Vygotsky (1978, 1987), the field theory of Pierre Bourdieu (1977, 1993) and discourse analysis of Mikhail Bakhtin (1981) to comment upon both identity and agency in figured worlds. It could be argued that what the Blockheads lack in identity-making, Majic Jungle makes up for in agency as there seems to be more freedom with what the avatar can do in this figured world. One final consideration is the look of both Minecraft and Blockheads games: rather than trying to design a photo-realistic avatar, there is a retro 16-bit graphics reminiscent of classic arcade games from the 1980’s like Space Invaders or Pac-Man. Instead of alienating the players with rudimentary graphic, there is a simplicity in the masking, as described by McCloud (1993), which seems to bridge the “uncanny valley” gap mentioned by Mori (1970) that allows the player to readily identify with the figured world in the game and “mastery over [their] imagination.” (Holland *et al.,* 1998, p. 236). It is similar to what Kress (1997) calls “to hand.”

Methodology

The case study includes six weeks of interviews with a six-year old boy, Tom, for approximately one hour each week. While living in Japan, I became acquainted with a newlywed couple around the time of their son’s birth, and through the years got to know Tom very well. Even when I returned to Canada, my wife and I would keep in touch with this family mainly through Skype video conversations. He is very familiar with computer and mobile phone screens, truly the “digital native” that Marc Prensky (2001) envisioned, and while neither Tom nor I are fluent in each other’s language, the textual and visual language available through the Internet has provided us with a rich variety of cultural exchanges. For most of Tom’s life, he lived in the suburbs just outside the prefecture’s capitol city. When he was four years old, his family moved to Tokyo so that Tom’s father could complete his Master of Business Administration degree at a university there, and they returned to live in a central location of their home prefecture, just in time for Tom to start grade one. Tom’s father was promoted once he earned his MBA degree, which allows his wife to stay at home raising Tom and the family’s second child, Tom’s sister. The demands of school, after-school activities and family events limited observations to once a week, yet Tom’s enthusiasm as a participant made it possible to reconnect from one week to the other.

The main purpose of the interviews was to find out Tom’s progress in understanding the virtual world game the Blockheads, but his mother raised an issue before the case study began. Initially she agreed to the prospect of allowing her son to explore a virtual world, yet when she found out that it would involve playing a game app on her mobile phone she referred to a forthcoming national policy that would ban elementary school children from playing video games on mobile devices. This development gets investigated further in my final paper for my doctoral seminar (Theoretical Frames for Language and Literacy Research) that will align theories of the New London Group, Dorothy Holland and Vygotsky with the issue of digital technology use and learning in Japan. The concern for Tom’s mother was that her son would neglect his studies, start imitating the avatar habits at school (thus risking censure from classmates and teachers) and finally that his mental development would suffer due to divided attention between the virtual world and his school work. As best I could to assure both of Tom’s parents that this my research method would have minimal impact on Tom’s schooling and mental development, there is still the risk that his experiments with the virtual world run contrary to the national policy against mobile gaming.



Fig. 1: Tom prepares to enter The Blockhead world

Case Study

At the end of October, 2013, Skype interviews with Tom began. His parents preferred that their son played the Blockhead game on weekend morning, and with some guidance setting up the English language game that included translating instructions into Japanese, Tom selected the Blockhead avatar Thomas. It should be noted that both the pseudonym Tom and his avatar’s name Thomas are closely related the subject’s Japanese name, and even before starting this game he would identify with the western name Tom. One of the potential attractions of this virtual world was Tom’s opportunity to build an identity outside his real life experience as a first grade student in a mid-sized city in Japan. During the initial interview, Tom could answer questions posed to him, but he was more focused in learning how to make the avatar Thomas navigate the world. It was not too long before he discovered the icons in his inventory sidebar, could operate the shovel for digging and eat an apple to restore health and hunger levels. He was able to perform all the actions in the game, including walking to explore the world, by swiping across the screen and tapping on the place he wants to go. These actions soon became instinctual, and part of reason for selecting this English language game was the ease of use, based on more icon than textual instructions. In subsequent weeks, Tom very capably demonstrated he had the ability to play the game, and learn independently while playing.

One set of instructions, however, needed to be more explicit for further game-play. The oval portal (Fig. 1) is the game’s starting point, how Thomas entered into the virtual world, and is only place during the game’s start-up where players can create workbenches. These workbenches allow the player to craft tools, make clothing and fashion other items together that will allow the avatars to collect more, go further out into the world, and build a home. It is possible that Tom would have been able to figure out for himself the types of workbenches he would need to create to increase his game-play, especially as the introductory video he watched prior to playing the game showed him that there will be more items in the inventory than when he started. In one of the rare few instances during our weekly interviews, I gave Tom instructions on how to create a workbench without being prompted by Tom’s inquiry. Once the workbench was created, it was placed near the portal and left for later use. By the third interview, Tom recalled that he would be able to make a bonfire:

Tom: Whoa, I have so many sticks! [his inventory sidebar reveals, when tapped, that Thomas has picked up over 60 sticks]

Kyle: I wonder what you can do with them.

Tom: I saw something in one of the chests [the game’s workbench for crafting tools] that I can make a bonfire.

Kyle: How are you going to make one?

Tom: I have to go back to the chest and make them with my sticks.

Kyle: That would be nice.

Tom: Then I can have a huge fire. (he sets about returning his avatar to the portal)

Once a player builds a campfire, the avatar will be able to craft torches from additional sticks to increase visibility. Other tools to be created at different workbenches include shovels and pickaxes for increased digging, baskets to upgrade inventory storage, and even a spear and fishing rod to capture food that can then be cooked at the campfire. All of these discoveries would remain open for Tom in the game, and occasionally I would prompt his inquiry by asking if he had seen things like dodo birds or fish in his exploration and wonder what he could do with them. The purpose of the case study remains to understand how much Tom would be able to learn from the game on his own.

The language barrier presented a noteworthy challenge, not only for Tom to understand textual commands in English, but also how I was able to interpret Tom’s responses to my questions. Most Skype conversations included a native Japanese person who would translate my questions for Tom and interpret his answers for me. Thankfully, my wife proved to be a valuable collaborator in this case study, not only as she was acquainted with Tom and could speak directly to him, but she is a professional early childcare educator with many insights into meaning-making and play-based learning. She could also get more details from Tom’s mother about his experiences with the virtual world between interviews. One significant moment was related to my wife, midway through the case study. Tom’s mother had lent her son her smartphone and left him to play with it in the living room while she took care of chores around the apartment. When she returned to the living room she noticed her son miming the action of digging a hole, and asked what he was doing. Tom explained that he felt bad for Thomas as he is doing all the work in the virtual world. By acting out some of the digging himself, Tom hoped to feel what his avatar was going through. This sense of empathy connects to Vygotsky’s theory of symbolic mediation (1987) that helps with internalizing actions that promote mental development. Both Tom and his mother reflected upon the confidence Tom gained through playing the game, where the first couple of weeks he had to ask his mother or myself question on how to operate the game, but he soon learned the steps to move and make thing by himself. It was both a positive and negative experience for his mother, who noticed the increased motivation, but worried that his independence would cause problems later. One incident she reported in the last week of the study, Tom started using the toaster oven without asking for help, and her concern was that he could get into trouble and not know how to undo it like in the virtual world.

The one aspect of the game Tom enjoyed the most was the ability to control the avatar, and how easy it was for Tom to make Thomas do things. He could explain what various sounds and visual cues meant in the virtual world, and demonstrated what needs to happen when the avatar is tired, hungry or injured. One of the challenges he faced were characters called “drop bears”, variously referred to as a wolf and a gorilla. They hide high in the virtual world’s trees, and could quickly attack the avatar, lowering the health and energy points. Armed with one of the tools, however, Thomas could attack these animals and get material (leather and fur for crafting into clothes for the avatar) from their remains. Tom was not so much interested in adding to Thomas’ inventory as he was in seeking revenge against his attackers, another part of the game that he enjoyed. When asked what he would do if he met such an animal in real life, Tom answered that he would distract the animal and then run away, choosing flight instead of the fight instinct fostered by the game. His mother, on the other hand, felt that Tom might think he could fight with the animal, but would really not know what to do. “He would pee his pants” a more likely outcome, and her assessment of the learning that takes place in the game is helpful for actual lived events since most activities children can imagine already happen in a virtual world (Calhoun, 1991). While it may have been a troubling issue where violence and revenge become objectives in the game, Tom still found the ability to control Thomas and explore the world to be the purpose of this game, and the parts that he enjoyed the most.



Fig. 2: Blockhead Thomas

During interview sessions, Tom played the game and his attention was divided between trying something new and explaining what he had done with the game during the week. He was very articulate about how much he enjoyed playing in this virtual world, yet as not always attentive to my questions and prompts during the interview. Part of the game design allows avatars to swim and catch fish, but as he had not yet found any bodies of water in the virtual world he was doubtful if Thomas could swim, even felt concern that he might drown. In order to access other information about his level of independence, I asked him to draw a picture of the game (Fig. 2) and using Kress and van Leeuwen’s (1996) visual realizations of interactive meaning, Tom confidently draws Thomas in with a demand gaze, frame in an impersonal yet involving frontal angle. To the left of Thomas is the house that he built, as well as the holes he dug with the items in his hands help with digging. It is an intriguing imaginative space that he recreates on paper, as Tom represents both what is possible (digging and building) and beyond the game’s design (the avatar can only hold one item at a time) which demonstrates the level of accuracy in his drawing. Thomas’ size in relation the house and underground path suggest that Tom has placed Thomas in the foreground, despite the side-scrolling design of the game which place all the action in a two-dimensional plane, also indicates there is more to the game world than what appears on his mother’s mobile phone screen.

Analysis

By the end of the case study, Tom indicated that he would be sad not to play the Blockhead game anymore, but he seemed to understand that playing the game for the purposes of this study would only be for a limited time. He was not too put out, as there were plenty of other opportunities to engage and develop his active mind. One activity involved the toast oven, as mentioned above, which Tom used to create see-through stickers. Asides from learning how to operate mechanical devices independently, much to his parents’ alarm it seems, due to his being involved with this case study, his artistic creativity continued to develop. Tom’s mother studied art and worked on a mural project for a neighbouring community of her hometown, and both Tom and his sister were raised to opportunity to explore various art forms at home. Tom could draw detailed sketches from pictures published in nature magazines as well free-hand drawing, like the Blockhead Thomas in figure 2. One of his pencil crayon drawing won a prefectural contest and was on display at an art gallery. His experiences in the virtual world add to “sedimented identity” (Rowsell & Pahl, 2007, p. 394) in a figured world. During the last Skype interview, Tom placed a newly made sticker of a kangaroo on the computer screen (Fig. 3), augmenting the image of my wife and myself in our living room. Tom showed a digital native’s ability to work within his element.

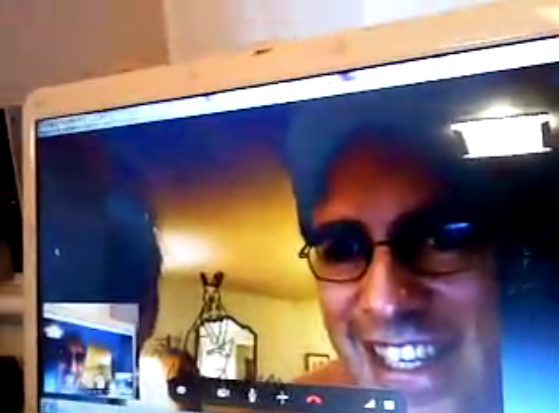


Fig. 3: Augmented image in Skype conversation

For the matter of cultural exchange, the virtual world afforded Tom and his family an activity to explore, despite the impending societal pressure to prevent children from engaging with this type of activity. Tom’s mother approved of the increased in her son’s motivation, but there was her implied hope that his interests could be directed at something more useful in traditional schooling and career-building models. Admittedly, there is much about Japanese culture that I have yet to learn that three years living in my wife’s hometown could not begin to uncover. The industrious and career-orientated work ethic could be seen in Tom’s father, whose demanding work schedule had him away from home most weekdays, making family time all the more precious on the weekends. Yet even within this self-sacrificing work culture, there is a strong sense that both the work team and the family benefit. The best illustration for this is Tom’s miming of his avatar Thomas’ digging. Along with health, hunger, energy and environment, one of the ways to regulate the Blockhead avatars’ productivity is with its happiness level. The status window indicates each of these qualities with simple bar graphs: a green line means the levels are full which becomes shorter and changes to red as the levels decrease. Tom performed actions such as eating, sleeping and building campfires in the virtual world, or acting out digging in his living room, in order not just to control a representative figure in a virtual world, but also to learn and share in a three-sided cultural exchange between Japan, Canada and the virtual.

Conclusion

This case study offered a chance to explore how children respond to new challenges in an unfamiliar yet increasingly mediated figured world. With guidance prompted by a child’s curiosity, actions that seemed beyond the child’s “zone of proximal development” (Vygotsky, 1978 p. 84) are soon internalized. Throughout Vygotsky’s *Mind in Society* and his other psychological works, the developmental importance of play gets emphasized. Virtual world game offer the child an ideal figured world where the only objective is to explore and play. Killing animals such as the drop bears or dodo birds offers some visceral thrills, similar to a treasure chest Tom dug up that was full of coins of little value in the single player version – they are needed for buying items off of others in the multiplayerversion. The most enjoyable aspect for Tom while playing the Blockheads was being able to control the avatar (as a virtual *player* in video game terminology). Cope and Kalantzis (2009) mention in reference to “new capitalism” of the 21st century intangible qualities such as “intellectual property, technological know-how, …brand identity, design aesthetics… are all the stuff of learning” (p. 169) are just a few of the skills that virtual world games promote. More simply put by their New London Group colleague, Gee (2004), “the work of childhood is play.” (p. 42)

It may seem encouraging for educational stakeholders to embrace the many learning possibilities that virtual worlds like the Blockheads (SecondLife, Minecraft or World of Warcraft) afford young minds, but a note of caution come from Craig Calhoun, (1991, cited in Holland *et al.*, 1998):

…it is important not to get too enamoured of “the media” as the tutelary spirits of postmodern societies. The stories and images they provide are learned, retold, analyzed and revalued in the contexts of our everyday communities. There exists embodied traditions of use⎯commentaries, practical guides, rules of thumb, and outright regulations⎯that make the effect of the figured worlds of our mass media anything but automatic or axiomatic. (p. 249)

Many of the games mentioned above are media for sale, in one sense or another. Platform games require the devices to run them on, whether they are computers, video game consoles or in Tom’s case, his mother’s mobile phone. Some of these games need to be purchased, others such as SecondLife and Blockheads are free to install on the preferred device. The catch, however, is that once the player starts to *work* in the virtual world, they are bombarded with offers to upgrade, earn more points or speed up the game-play, all for a price. One of Tom’s concerns as he navigated Thomas through his figured world were the interrupting messages, in English, asking him to upgrade the game. While the accompanying message was difficult to understand, the dollar signs in the message made it clear that the free app came with a hidden costs. Perhaps more regulations to keep players from becoming paying customers, but once Tom discover how to cancel potential costly in-game transactions, his childhood work could resume. And although his contribution to the case study is complete, there is the possibility of being able to meet up in the virtual world, whenever his family or mine happen to be in the same mobile service area.



Fig. 4: Tom at play with his sisterReference

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