

Out-of-school play in online virtual worlds and the implications for literacy learning

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Abstract

Research over the last thirty years has identified the symbiotic relationship between play and literacy in young children's out-of-school lives. Cognitive, ecological and socio-cultural perspectives have all informed understanding of how play can shape children's understanding of literacy and develop literacy skills and knowledge. Much of this research has focused on play in the 'offline' world, however young children are spending increasing amounts of time online as technology continues to create significant changes in social and cultural practices in the twenty-first century. Some of children's online interactions can be categorised as playful in nature, yet play and technology are frequently positioned as oppositional. In this paper, I explore the tensions surrounding the relationship between play and technology and relate it to similar discourses surrounding the concepts of 'real' and 'virtual'. I then move on to consider the growing popularity of virtual worlds with young children and examine the way in which the worlds have been marketed to children and parents/carers on the basis of their propensity to offer online play in a safe environment. The paper will provide an overview of some of the virtual worlds currently targeted at young children. I will outline the way in which these sites promote playful engagement with the reading and writing of multimodal texts. This analysis will be informed by ongoing empirical work, still in its early stages, in which children's experiences in virtual worlds are being identified through surveys, interviews and observations. It is argued that these virtual worlds offer young children a wide range of opportunities to decode, respond to and create multimodal texts in a playful space, significant activities in a new media age. The nature of these activities is analysed in relation to theories of play and literacy as social practices. The paper concludes by considering the implications of this analysis for the literacy curriculum in the early and primary years of schooling.

Introduction

Young children's home lives are becoming increasingly shaped by their engagement with a wide range of new technologies (Marsh et al., 2005; Rideout, Vandewater and Wartella, 2003). Much of this use of technology is playful in nature. Play in this context can be viewed as a phenomenon that, drawing from play theorists such as Pellegrini (1991), Sutton-Smith (1997), Broadhead (2004) and Wood and Attfield (2005) can be defined in numerous ways, but must be seen as an activity which is complex, multi-faceted and context-dependent. The study outlined in this paper focuses on young children's playful engagement with online virtual worlds. Online virtual worlds are immersive 2-D or 3-D simulations of persistent space in which users adopt an avatar in order to represent themselves and interact with others. They may or may not include game elements. The study is set within a context in which both the relationship between technology and play and the dynamic between the 'real' and the virtual have been subject to extensive critique, issues which will be explored briefly below before I move on to consider the nature of two popular virtual worlds for children.

There have been a number of anxieties expressed in relation to young children's playful engagement with technology for some years. For example, Levin and Rosenquest (2001) suggested that electronic toys posed a threat to children's ability to engage in open-ended, imaginative play. The Alliance for Childhood has promoted a similar negative view of the role of technology in early childhood (Cordes and Miller, 2000), suggesting that technology does not promote a healthy childhood. More recently, similar concerns have been raised in relation to notions of a 'toxic childhood' (Palmer, 2006). However, there is no convincing research evidence to suggest that play and technology are incompatible (Yelland, 1999) and indeed Plowman suggests that other aspects are more determining of the quality of play than the technological nature of toys themselves (Plowman, 2005). This is not to suggest that children's use of new technologies is unproblematic; there is a range of issues which need to be addressed with regard to this use, including safety, balanced use and commercialism, but a more considered response to the relationship between childhood and technology is required.

The dichotomy often posited between play and technology is similar to the anxieties often expressed about virtual world experiences. There have been numerous 'doomsday' scenarios developed regarding children's engagement in virtual worlds, such as that by the development psychologist Putnam, who eleven years ago offered his prediction about the future:

I predict that in ten years we will be faced with a group of socially withdrawn teenagers who are "addicted" to living in their virtual worlds. The window of opportunity to anticipate this problem and to implement research, regulation and

intervention efforts is rapidly closing.

(Putnam, 1997, p211)

Valentine and Holloway (2002) identified the negative stance adopted by some commentators on virtual worlds (e.g. McLaughlin, Osbourne and Smith, 1995) and suggested that, 'In the eyes of the debunkers, the "virtual" (the false, the inauthentic, the new, the disembodied) threatens to invade or pollute "the real" (the genuine, the authentic, the traditional, the embodied)' (Valentine and Holloway, 2002, p304). However, their study of 11-16 year-olds use of online spaces indicated that in fact there was much overlap between young people's online and offline worlds, as young people interacted online with peers with whom they socialised at school. This phenomenon has been noted by other researchers (Davies, in press; Thomas, 2007), suggesting that it is futile to separate children's engagement in 'real' and virtual environments in this way; instead, we should view their experiences along a continuum in which children's online and offline experiences merge.

The study outlined in this paper is focused on young children's use of popular virtual worlds at home, worlds that have been devised by profit-making companies, rather than virtual worlds set up to be used in schools for educational purposes (see, for example, Johnson et al., 1999; Merchant, 2007). This is because these worlds are becoming increasingly prevalent in young children's out-of-school lives. It is important, therefore, to examine young children's engagement in online worlds in order to identify the implications for educators, given the significance of out-of-school multimodal, multi-mediated technological practices for the communications, language and literacy curriculum (Jewitt, 2008; Lankshear and Knobel, 2006). In addition, these worlds offer children a range of opportunities to engage playfully in a range of literacy activities. In the following section, I consider briefly the relationship between play and literacy.

Play and literacy

Research on play and literacy has drawn primarily on cognitive, ecological and socio-cultural perspectives (Roskos and Christie, 2007) in its attempts to untangle the relationships between the two. In relation to cognition, play has been identified as having a positive impact on comprehension and recall of stories (Pellegrini and Galda, 1993; Rowe, 2007) and drawing from Vygotskian notion of the zone of proximal development (Vygotsky, 1967), play can offer opportunities for children to achieve competence and confidence in literacy practices when undertaken in supportive contexts. Ecological perspectives have illuminated the importance of providing literacy resources in play contexts in order to provide opportunities for authentic literacy practices (Neuman and Roskos, 1997). Socio-cultural approaches have developed our

understanding of how play can develop children's knowledge of their social and cultural contexts, enabling them to engage in play shaped by the local context.

The research on literacy and play has been almost solely focused on print-based practices, although there is emerging work which explores play in relation to a range of new technologies (Willett, Robinson and Marsh, in press).

Play can be an individual practice but often the impetus for playful activity in childhood is social. Drawing on Sutton-Smith's argument that, far from always being intrinsically, individually motivated, play is fostered by the desire to engage with the community, Pelletier suggests that:

...rather than being removed from real life, secluded within a 'magic circle', play is ritualistic, concerned with establishing and maintaining social norms and policing borders between social inclusion and exclusion. This is not to deny the phantasmagorical dimension of play, its level of pretence and mimicry, or the pleasure it generates. But it is to frame play as a social practice, embedded in social rituals, with its own 'instrumental' behaviours, and within - rather than outside - the broad functioning of society (Pelletier, in press).

Thus, engaging in play as a social practice can enable children to experience literacy as a social practice. Hall (2007) has outlined how play can facilitate children's engagement with purposes for literacy that are embedded in everyday lives and, in this paper, I explore how far children's use of virtual worlds can also allow them to experience a range of purposes for literacy.

Club Penguin and Barbie Girls

The online virtual worlds that feature in this analysis are *Club Penguin* and *Barbie Girls*. *Club Penguin* was developed by the media company New Horizon Interactive in Canada and opened to public use in October 2005 with approximately 25,000 users. In 2007, there were more than 12 million registered users and the world was subsequently acquired by Disney Inc. for £350 million. *Barbie Girls* was developed by Mattel Inc. and launched in 2007. It currently has approximately 11 million registered users. The worlds differ in terms of their affordances, but both *Club Penguin* and *Barbie Girls* enable children to create and dress-up an avatar, decorate their avatar's home, buy and look after pets and play games in order to earn money to purchase items for their avatars and homes.

Whilst the virtual worlds are intended for children's use, parents are targeted in the marketing strategies that surround the sites. Cook (2008) outlines how parents and

children are constructed as co-consumers in contemporary commercial contexts and on *Club Penguin* and *Barbie Girls*, sections of the websites are devoted to outlining to parents how interaction on the sites is tightly controlled and monitored in order to allay their concerns regarding Internet safety. This seems to be a successful strategy, as there are numerous sites across the web in which parents state that they feel comfortable with the safety measures in place, as this typical post attests:

i let my kids useclub penguin and i think it is perfectly safe
i read through all the parents bit and privacy and safety and it is completly safe
it also teaches your kids the rules of chatting online and i would reccomend it to
every one else

Posted by: sophie at February 20, 2007 01:22 PM¹

This parents' desire for her children to learn the practices associated with social networking is one shared by many others. In a recent report, the National School Boards Association (NSBA, 2007) in the USA surveyed 1,039 parents and stated that the majority of parents held positive views regarding the educational potential of social networking sites. Similarly, in the 'Digital Beginnings' study, parental attitudes demonstrated positive attitudes towards the role of new technologies in their children's lives (Marsh et al., 2005).

The *Club Penguin* site is well designed, with strong use of primary colours and stylised features of the landscape (for example snow, sea, mountains and forests) that are depicted across all areas of the world, thus offering a coherent and well-defined environment (see Figure 1). The use of multicoloured penguins as avatars means that cultural representations of identity are not narrowed in the way that they are in other worlds that use human forms, such as *Barbie Girls*. However artefacts, including clothing and furniture, throughout the world are generally 'Westernised' in nature and there is little to denote cultural heterogeneity.

Text is kept to a minimum and is used primarily to identify the use of buildings. Symbols, such as arrows, are used throughout the world to guide penguins and every page contains the icons which link to a map of the world, the *Club Penguin Newspaper* and the 'Moderator', who can be contacted if penguins wish to complain about the behaviour of others in the world.

¹ Posted on 'Business Week' blog at:
http://www.businessweek.com/careers/workingparents/blog/archives/2006/09/while_moms_away.html

Figure 1: *Club Penguin* (reproduced with the permission of New Horizon Interactive/ Disney Inc)



The navigation bar at the bottom of the screen contains icons that enable children to engage in chat with other penguins, to use emoticons, to throw snowballs, to contact other penguins in order to request that they become friends and to navigate to their avatar's home, their igloo. Chat appears in speech bubbles above the heads of avatars, similar to the placement of speech in comics. This limited use of text and extensive use of icons and symbols means that very young children find it relatively straightforward to navigate *Club Penguin*. Some of the servers enable 'safe chat' mode, which means that users choose from a set of words and phrases in order to communicate with each other, again enabling children who are not fluent writers to engage in communication with other avatars.

Club Penguin does contain texts that are more extensive in nature for those that wish to access them. The newspaper, for example, contains puzzles, jokes and stories and there is a library that contains books, including interactive books, for longer reads. In addition, the *Club Penguin Times* does invite users to submit pictures and articles. The

world of *Club Penguin* therefore appears to promote literacy in ways that are not apparent in *Barbie Girls*.

Barbie Girls does enable users to engage in safe chat and there are opportunities to send email messages to friends in-world. However, there are no newspapers, books or catalogues to read and there is little encouragement of user engagement in literacy activities. Instead, the main in-world activity appears to be shopping. 'Barbie bucks' are easy to earn in a range of games which include painting nails and giving Ken a make-over. Throughout this hetero-normative world, the 'heterosexual matrix' (Butler, 1990) is writ large. Representations of femininity are very limited and stereotypical in nature. The range of skin colours that users can choose for their avatars is limited, as is the range of hairstyles, most of which appear to be more appropriate for Caucasian ethnic groups. The predominant colour used throughout the world is pink and there is a high level of use of pastel shades. Unlike the environment of *Club Penguin*, which features shops and buildings within a natural environment, the landscape of *Barbie Girls* is that of a shopping mall, with a single park that enables avatars to mingle. The discourse here is similar to that surrounding numerous texts and artefacts aimed at young girls, as Carrington has outlined in her analysis of Bratz dolls (Carrington, 2003).

Commodity purchasing is a key activity in both *Barbie Girl* and *Club Penguin*. Users earn coins by playing games and then are able to spend the coins dressing their avatars and homes. In the case of *Club Penguin*, purchasing extra membership and in *Barbie Girls* buying a 'real world' MP3 player enables users to access a greater range of items to purchase for their avatar and igloo. It would appear that just as forms of capital (Bourdieu, 1990) operate in virtual worlds inhabited by adults, such as *Second Life*, the child-orientated worlds are also shaped by social, economic and cultural capital. In addition, the global flows of mediascapes and ideoscapes (Appadurai, 2006) can be seen to permeate the world of sites such as *Barbie Girls*, which is located within a nexus of commercialised practices that operate across online and offline worlds (Grimes, 2008).

The study

At the time of writing this paper, this study of children's engagement in these virtual worlds is not complete. The study is based in a primary school in the north of England. The school serves a primarily white, working class community located on a public housing estate. An online survey was set up which asked children to identify if they used virtual worlds and, if so, how often. The questionnaire also explored their reading and play activities in the virtual worlds. Children were asked to complete the survey when they attended ICT lessons in the IT suite, which each class in the school did twice a week. A total of 175 children across all year groups (Foundation Stage to Year 6, ages 5-11) completed the survey. In addition, 15 children in Year 2 (aged 6 and 7) and Year 6

(aged 10 and 11) took part in a series of four group interviews. Four children are to be observed using the virtual worlds in their homes, but this stage of the study has yet to commence.

In total, 52% of the children surveyed stated that they used virtual worlds on a regular basis. In this paper, I focus on the data from the youngest children, aged five to eight. Thirty-eight children in the Foundation Stage and Key Stage 1 completed the survey. Some of the children in the Foundation Stage were supported in their completion of the online survey in that questions were read out to them when necessary and their responses inputted by an adult, but children in the Year 1 and Year 2 classes completed the survey independently in most cases. This paper focuses on the responses of 13 children in this group, aged from 5-7 years, who indicated in the survey that they used virtual worlds. The paper also reflects on the findings of the interviews with ten children from Year 2.

The use of virtual worlds

Thirteen children (six girls and seven boys) in the Foundation Stage, Year 1 and Year 2 classes indicated that they use virtual worlds. Of this group, nine access virtual worlds once a week or more, three use them once or twice a month and one child uses them less frequently than once a month. Four five year-olds, three six-year-olds and six seven-year-olds have stated that they use virtual worlds. The choice of worlds for this youngest group appeared to be gendered in nature. Five of the six girls stated that they used *Barbie Girls* and none of the boys stated that they used this world. The sixth girl could not remember the name of the world she used, but she said it was 'one with pets on it'. This could include sites such as *Neopets* or *Webkinz*, both of which are popular with girls. Five of the boys played on *Club Penguin* and two played on *Nicktropolis*. None of the younger girls played on *Club Penguin*, although girls in Key Stage 2 in the larger sample did. Whilst research relating to older users of virtual worlds suggests that people often adopt avatars of a different gender than themselves (Hussain and Griffiths, 2008), this was not the case with these young players, all of whom apart from one stated that their avatars were the same gender as themselves. In their responses to this question, issues relating to border-policing of gendered identities (Thorne, 1993) could be discerned, as children expressed the reasons for now wanting differently gendered avatars to be one of aversion. For example, Lisa suggested that her avatar was a girl because:

...boys are dirty and smelly (Lisa, aged 7)

Unusually, Thomas's avatar was a girl and this was because, he explained, his older sister had made him adopt a girl avatar.

The children were asked why they used the virtual worlds. Play featured strongly in the responses. Children suggested that they enjoyed the games:

It's [Club Penguin] got some ski game. It's really good so I can ride on sleds and it goes really, really fast. (Leo, aged 7)

It's all games. I like the games. (Ewan, aged 5)

Games appear to be a major draw for young children in their use of the Internet (Marsh et al., 2005). Indeed, online gaming is not a phenomenon limited to childhood; it is a strong feature of older children and adults' use of the Internet (Livingstone and Bober, 2005). Some researchers have identified a range of learning opportunities related to the use of computer games (Gee, 2003) and there is further research to be undertaken regarding the educational benefits of using games in these online virtual worlds.

Play in virtual worlds

The types of that children reported engaging in within *Club Penguin* included fantasy play, socio-dramatic play, ritualised play, games with rules, and what might be called 'rough and tumble' play, albeit that I am suggesting here a virtual version of offline physical play.

Fantasy play involves children creating imaginative narratives involving characters and roles that are not necessarily based on 'real-life' examples. *Club Penguin* promotes fantasy play through the provision of costumes that enable children to adopt a range of imaginary personas, such as pirates and mermaids. The producers also develop narratives that run across specific time-scales and which invite children into narrative-related play. Each narrative theme involves children collecting special 'pins' that are placed in the virtual world for as long as that narrative runs. This encourages children to keep returning to the site and also locks into the collection-driven play offered by other commercial products such as *Pokémon* and *Beanie Babies*. The fantasy play, therefore, can change quickly from week to week as children engage in the various narrative themes.

Sociodramatic play involves children undertaking play activities based on domestic, everyday practices and involves social interaction. As in children's sociodramatic play in the offline world, children reported adopting a range of adult roles in the virtual worlds and sometimes drew on adult-focused cultural scripts in this play:

Me and my friends and my cousins and strangers who come to my party, we all went to the disco room and then when we were all drunk we went back to my house and had a little lay down. (Brendan, aged 7)

This kind of play was not always co-operative. For example, Lisa describes how she sometimes behaved when she went to the parties of other penguins:

I like dance around and check if they've been looking after their puffles and if they've got security cameras I throw snowballs at them and block them. (Lisa, aged 7)

Some children reported engaging in ritualised play whilst in *Club Penguin*. A popular pastime in *Club Penguin* appeared to be the demonstration of affection for other penguins by the use of the heart emoticon:

I like reading messages and falling in love with girl penguins. I have got about five girlfriends. You have to win a loveheart and then you can send them to them. (Billy, aged 7)

This development of in-world rituals is typical of similar online environments aimed at adults. In a study of Massive Multiplayer Online Games (MMOGs), such as *World of Warcraft*, Steinkuehler (2005:12) noted that 'In-game social groups devise rituals and performances...and generate in-game antics and adventures' which develop social communities of practice. A range of such rituals and antics can be identified in *Club Penguin*, some of which are captured for posterity and posted as machinima on YouTube for post-ritual celebration and reiteration of the bonds. For example, comments on a machinima which outlines a 'war' featuring various gangs garnered comments such as the following, which served the purpose of marking membership of a community of practice.

i was in that vid im naruto6168 awesome =D (narutofreak616)

me was there (homeofravensrh4755)

awesome! I was there! :) Thats my home server its usualy quiet, then one day it's full, amazing lol (supposedcp)

cool l was there fighting with rpf (pokemon12d)

same here. i rember dat. i think i was on the gold (cplpg123)

Rule-bound games are an integral part of many virtual worlds aimed at children. These games enable children to accrue in-world currency, which allows them to purchase items for their avatars and homes. However, in addition to the games offered by the producers of the virtual worlds, children reported playing rule-based games in-world that they had first played in the offline worlds, such as hide-and-seek and musical chairs. Finally, whilst 'rough and tumble play' is normally used to describe physical play such as pay-fighting, wrestling and chasing, I adopt this term in this instance to describe online play that involved deliberate attempts by children to engage in avatar-to-avatar contact, which did include chasing and also co-ordinating movements with other avatars in order to achieve certain ends. For example, one of the activities reported was the attempt to tip an iceberg by standing at one side of it with numerous other avatars.

Children reported undertaking different roles in their in-world play. In their analysis of children's use of the BBC virtual world 'Adventure Rock', Gauntlett and Jackson (2008) suggest that there are eight different roles that were adopted by the users of that site. These are:

- Nurturers
- Explorer-investigators
- Self-stampers
- Social climbers
- Fighters
- Power-users
- Life-system builders
- Collector-consumers

It is unlikely that children remain in one category, although children in this study did indicate that they adopted these roles at various times. The existence of 'fighters' within the world can be demonstrated by the machinima on YouTube which feature gang wars, discussed previously. In this study, a number of children indicated that they enjoyed being 'nurturers'. Caring for pets in virtual worlds is a popular activity with young children, as suggested by Ruth's reason for enjoying the use of a virtual world focused on pets:

It's good because you get to feed the pet and play with it. (Ruth, aged 7)

This is a phenomenon that has a long history in children's play, with toys such as the Tamagotchi being popular in the late twentieth century. *Club Penguin* attempts to

inculcate in the players a sense of duty towards these pets and they remove pets from players' igloos if they fail to take care of them:

Lisa: I go on the games...all the money I get back I save it up to buy furniture and pets and things. And I've already got some pets but one of them ran away.

Jackie: Why did it run away?

Lisa: I weren't feeding it – I left it at home. They're supposed to be left at home. I can't take all 15 of them out for a walk. It were called 'Princess'.

Here, Lisa expresses frustration with the requirements imposed by the game makers, requirements which are very much related to Disney's desires to ensure children keep returning to the site over time.

There was also evidence that many children adopted a 'collector-consumer' role in *Club Penguin* and *Barbie Girls*. Shopping is a popular in-world activity. In this survey, girls were more likely to mention that they enjoyed the shopping activities:

It's fun and activities and I like going shopping for the shoes. (Charlene, aged 6)

I like going to the shop. I like to buy shoes. (Eve, aged 5)

You get to see a lot of the Barbie things. You get to buy handbags and umbrellas what's got Barbie on. (Judy, aged 5)

However, shopping created problems for those children who would have liked greater agency in relation to the construction of artefacts. The prospects for creation within *Club Penguin* and *Barbie Girls* are limited at present. Lisa, aged seven, appeared to be most frustrated that she could not be creative in terms of enabling her avatar to wear a wig and a tiara at the same time:

Lisa: I got it this mermaid's costume with this tiara. And I got it a wig and it's just like that [makes shape of a beehive] ...The thing I thought in the end, I should have never bought the wig or the tiara.

Jackie: Why?

Lisa: 'Cos I thought I could wear the wig underneath and then the tiara on the top, it would be a lot more nicer.

Jackie: And can't you?

Lisa: No, it just takes it off. I wish there were a reverse button where you could get your money back. Like a garage sale.

Unlike virtual worlds for young people and adults which include the opportunity to utilise programming skills in order to create in-world objects and artefacts and customise avatars (as is the case in *Second Life*, for example), the virtual worlds aimed at younger children do not foster such creativity. Given the extent to which children and young people are engaged in developing user-generated content in out-of-school contexts (Lankshear and Knobel, 2006), indeed becoming 'producers' (Bruns, 2006) this appears to be a short-sighted approach.

Shopping was undertaken by both girls and boys, but was talked about more frequently by the girls, who discussed shopping for shoes and handbags. That children engage in stereotypically gendered play online should be of little surprise when one considers the pervasive nature of such play in the offline world (Wood and Cook, 2006). Further, here we can see, as Miller and Rose (1997) suggest, the child constructed as the "'subject of consumption'", the individual who is imagined and acted upon by the imperative to consume' (Miller and Rose, 1997:1). This is not to suggest that online virtual worlds are the only arena in which happens; young children are the targets of commercial advertising from a very young age. However, the relationship between childhood and consumerism is complex and:

...it is important for scholars to be cognizant of the often unexamined assumption that posits children as somehow outside the realm of economic life who are then brought into it either by caring adults, like parents or teachers, or dragged in by media and marketers. That line which divides 'in' from 'out' fades every day as structures of capital help structure the imagining of the worlds into which a child enters well before its post-partum existence.

(Cook, 2008: 236)

That being said, children can engage in critical analysis of the way in which they are positioned by these sites. Children's engagement with texts of all kind should involve critical literacy practices and very young children are capable of asking key questions about power and control (Vasquez, 2004).

Cross (in press) suggests that in play, children can move from catotropic mimesis, which involves reproduction of external reality, to metatropic mimesis, a recreation, rearrangement of external reality. This movement across a continuum between the two positions could also be discerned in comments made by children in this study. At times, children reproduced narratives observed in their offline worlds and confirmed to the rules of game playing and at other times children played with the rules themselves, reconfiguring the representations of external realities. However, Albrechtslund suggests that mimesis can never be simply a replication of reality but is:

...understood as a configuration in fictive terms of something already prefigured in the life experience of the reader, and becomes an active reconfiguration of the reality of the text interacting with the reality of the reader. Thus, the world of the text and the world of the reader are united through the preconception of the reader, since the text's reference to a known, common world is a condition of its understandability.

(Albrechtslund, nd :2)

Play in virtual worlds is, therefore, not virtual play, a reproduction of playful behaviour in the 'real' world, nor do children engage in virtual literacy practices whilst in-world. Much of the playful engagement in virtual worlds involved literacy practices. At times, literacy was a functional tool, used to enable children to understand how to undertake various actions, or to complete tasks. However, more often literacy enabled social interaction with others and also facilitated individual pleasure, as outlined in the following section.

Literacy in virtual worlds

Given the extent to which *Club Penguin* promotes literacy activities, with *Barbie Girl* offering this to a lesser extent, the survey identified how far the children engaged with the available texts. Three of the children stated that they did not like reading in the world and one stated that she was not sure. The other nine children all suggested that they enjoyed writing and reading in-world. In *Barbie Girl*, there is an opportunity to write email messages to other avatars from the comfort of one's bedroom:

I like going in my bedroom on it because there is fun stuff to do in there like sending messages. (Charlene, aged 6)

As is the case with older children (Davies, in press), these young children often socialised in-world with children they knew in the offline world:

I send some [instant messages] to my cousins and once I said, "Hello, can I come over?" because he lives near Morrisons. Sometimes I say, "Can I come over, but sometimes his mum doesn't let me...so I say, "OK, I'll see you later". (Terence, aged 7)

Instant messaging was used by children to contact others and there was some evidence that this in-world messaging was replacing use of MSN for some children. The communicative practices were, inevitably, multimodal. As with MSN, children reported using emoticons in their communications in addition to written text and images were

central to the texts that children produced and then sent in to Disney for publication in-world.

Children reported reading a range of texts in *Club Penguin*:

[I read] newspapers because it tells you what's new and what you can buy. I read it every single day. (Ewan, aged 7)

I read them letters what tell you if they are your buddies or not and when they send you postcards and things. (Lisa, aged 7)

In addition, children stated that they accessed the instructions for games and the library books that can be accessed in the world. Some children reported that they found this reading exciting, which contrasted with how they felt about reading in the offline world. Bradley discussed how he enjoyed reading in *Club Penguin* and outlined how reading enabled him to complete some tasks:

Bradley (aged 7): *When I go fishing I take a book to learn how to do it.*

Jackie: *Do you like reading in real life?*

Bradley: *No.*

Jackie: *Why?*

Bradley: *Because it just gets me stressed out.*

Jackie: *So why do you like reading in 'Club Penguin'?*

Bradley: *Because it's got exciting stuff.*

Previous research has indicated that reading popular cultural texts can be very motivating for children (Marsh and Millard, 2005) and it would appear that for these children, virtual worlds offered a means of engaging in literacy practices that interested them. The majority of literacy activities undertaken in-world was integral to children's play, although at times they reported reading the newspaper and books independently of play narratives/ contexts.

The literacy skills, knowledge and understanding that virtual worlds for children can foster include:

- reading skills and strategies including: word recognition (e.g. the vocabulary choices in 'safe chat' mode; instructions; in-world environmental text), comprehension, scanning text in order to retrieve appropriate information, familiarity with how different texts are structured and organised, understanding of authors' viewpoint, purposes and overall effect of the text on the reader;

- writing skills and strategies including: spelling, punctuation, syntax, writing using and adapting a range of forms appropriate for purpose and audience, using language for particular effect;
- writing for known and unknown audiences;
- using text to negotiate, collaborate and evaluate.

In addition, children develop skills across the visual, gestural and aural modes. They are learning to navigate multimodal environments and read visual landscapes as they guide their avatars through the terrain of the worlds. This has obvious implications for the development of skills, knowledge and understanding in relation to digital texts that will be of use in the twenty-first century.

Conclusion

In this study, young children demonstrated engagement in a range of play and literacy activities that replicate offline practices but that also sometimes enabled interaction distinct to online spaces. The analysis of sites such as *Club Penguin* and *Barbie Girls* is important for early years educators because they are indicative of the kinds of texts which will become increasingly central to children's play and literacy practices over the coming years. In these worlds, children construct, re-construct and perform identities and learn how to engage with others in online forums. Given the extent to which online social networking appears to be a popular activity with older children and young people (Dowdall, in press), young children's engagement in online virtual worlds might offer useful opportunities to develop skills that will enable them to navigate online environments more safely and appropriately. These worlds are becoming a part of the everyday landscape of play for young children and rather than dismiss them as irrelevant, or deride them as potentially harmful environments, academics and educators need to examine their affordances more closely in order to identify what children gain from their playful engagement in these worlds and how that can be built upon in early years settings and schools. There is little doubt that literacy is being fundamentally transformed in the new media age (Kress, 2003). We need to consider in what ways the communication, language and literacy curriculum should respond to these changes in order to ensure that all children develop the skills, knowledge and understanding necessary for the digital era.

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