

Game literacy, gaming cultures and media education

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ABSTRACT: This article presents an overview of how the popular “3-Cs” model (creative, critical and cultural) for literacy and media literacy can be applied to the study of computer games in the English and Media classroom. Focusing on the development of an existing computer games course that encompasses many opportunities for critical activity and creativity, it considers how the cultural function of literacy has been neglected for those functions that are easier to measure. It considers how opportunities to explore the cultural functions of texts, especially games, might be developed and how computer games might provide a unique opportunity for students to bring their own “cultural capital” into the classroom. It examines some student work from such “cultural” activities and concludes by recommending how and why we might develop “structured play” when using “living texts” such as computer games in the classroom.

KEYWORDS: Media literacy, computer games, English teaching, popular culture.

The term *literacy* remains “unsatisfactory” (Burn & Durran, 2007, p. 3) beyond a language application, since it poses as many problems as it perhaps solves. When appended to *media* or *games* it might suggest that there is a language of the media or of games that can be learned and of course “implicitly acknowledges the primacy of language” (Buckingham, 2003, p. 36). Yet *literacy* encompasses more than the written form of communication and *media literacy*, and by extension *games literacy*, suggests that there is more to these forms than “simply a *functional* literacy – the ability to make sense of a TV programme, or to operate a camera” (Burn & Durran, 2007, p. 38) or indeed play a game.

A popular model for literacy, the “3-Cs” (Burn & Durran, 2007, p. 11) suggests that literacy has cultural, creative and critical social functions. As we shall see, these are not separate, but tightly woven. At times, it might be possible to isolate a function or two and at others all three may be present in varying degrees. However, the way that students are taught might not always provide them with the variety and range of these functions.

Literacy is critical and requires the acquisition of skills that allow one to estimate the quality and character of a work. Media literacy works in the same way:

It involves analysis, evaluation and critical reflection. It entails the acquisition of a “metalanguage” – that is, a means of describing the forms and structures of different modes of communication; and it involves a broader understanding of the social, economic and institutional contexts of communication, and how these affect people’s experiences and practices (Buckingham, 2003, p. 38)

A seemingly obvious example of the *critical* function of literacy is reading. We might learn to *read* media texts or games in a similar way to *reading* a novel or a poem,

considering the skills of technique and the influence of contextual detail, alongside less learned responses, such as enjoyment. However, we must be aware that these contextual details reveal just as much about the *cultural* function of literacy to connect it to the practices and identities of writers and readers (or indeed game-makers and game-players), and serve as a reminder that we cannot isolate the social functions of literacy.

Literacy is creative and it might seem that the *creative* function of literacy is *writing* or producing texts. In English, the two are often linked in the phrase *creative writing*, where students are encouraged to show their originality and skill in writing. However, when we produce texts – whether they are written, media, or even games – we are *critically* combining *cultural* resources available to us from a variety of sources in creative and “transformative” ways to make original texts or, more often, taking an existing text and “remaking that text” (Burn and Durran, 2007, p. 2). We do this when we write about what we have read or take story elements that we have seen elsewhere and combine them with our own ideas. Similarly, we might *mash up* an existing film to produce a *YouTube* video. When we post these videos on the internet or share ideas about a novel in a forum, both virtual and real, we add to the texts; we move beyond producing *text*. Therefore, literacy is not only about having the skills, but knowing what to do with them and how using them will affect others and present ourselves to this audience: “Literacy” implies cultural competence. It is something that we use to claim membership of particular social groups’ (Burn and Durran, 2007, p. 3). We *write* ourselves into these groups by drawing on and adding to the critical, cultural and creative.

When applied to games:

[O]ur primary focus is on how we might teach *about* games as a cultural medium in their own right, just as we teach about film or television or literature. As in those other areas, we believe that this should not be confined to the critical analysis of existing texts but should also involve enabling students to create their own. (Buckingham and Burn, 2007, p. 323).

The precedent laid down by the subject of English to divide the critical – reading – from the creative – writing is often mirrored in studies of media texts, where we find analysis and production tasks separated. *Culture* provides a context for criticism or a framework for creativity, but is largely omitted as an area for discussion and study in English and media courses, especially the cultural experiences and resources of the students themselves. In addressing what constitutes *games literacy*, we should consider how we might teach and learn to be critically, creatively and culturally competent, so that we and students are not just able to *read* or *analyse* (criticise) and *write* or *produce* (create) games, but to draw out and draw on the students’ own culture.

THE NATURE OF GAMES

How students might learn to be critical, creative and cultural through games needs some consideration. Although games are “multimodal resources with interactive narrative structures” and provide a “wider lexicon of texts into the English and Media classroom” (Pelletier, 2005, p. 40), when considering what it is to be *game literate* we

need to be aware of their differences from other *English* and *media texts*. There are aspects of the game, which are distinct from the representational. Some argue computer games “should not be viewed as an extension of narrative, literature, theater (sic.) or cinema” (Frasca, 2001, p. 1). Unlike representational forms such as comic books and stories, there is not only one route through the text, one narrative. Instead, the text is dynamic and reliant upon the choices and actions of the player. Frasca acknowledges that whilst there might be a dynamic input such as the turning of the page in a comic book, or even more, one might suggest, in turning to another section and therefore an alternative narrative in the *Choose Your Own Adventure* series of books, these choices are limited in conventional forms of narrative. A game is a simulation:

It is a dynamic system that yes, contains thousands of potential “stories”, but it is larger than the sum of its parts. The simulation itself is not a narrative, it is something different... (Frasca, 2001, p. 1).

So on the one hand, the characteristics of games are different from other texts that are available for study in the English and media classroom. Juul’s model of “gameness” (2003) provides for six common features of games that are not to be found in the same way in other texts: rules; variable, quantifiable outcomes; positive and negative values to outcomes; player effort to reach outcome; emotional involvement in player in outcome; consequences for real life. On the other hand, some of the non-representational elements of games are similar to non-written forms that can be found in *traditional* English classrooms, such as improvised drama. Is the avatar in a game that different from a student acting a role? Are the choices made in a game that different from those made in devised drama, where a loose *story* can take many paths and those involved have many narrative choices to make?

Ludic elements – time limits, health points, economies (such as beans, coins and bullets) – are alien to other texts. Some stories such as *Hansel and Gretel* may have some game qualities: “the economy being the breadcrumbs that Hansel drops to find their way out of the forest” (Burn and Durran, 2007, p. 117). However, this *different-but-similar* model, where aspects of analysis and interpretation can be moved from one representational form to another, is consistent in media education where skills first applicable to one medium have been translated to another, such as literary narrative structure theories being applied to film. Conversely, some cinematic conventions are not translated into literature; films are differently constructed than plays. A film version of a Shakespearean text reorders or cuts between scenes to give the impression of simultaneous action, providing in a classroom, and in the popular debate, a comparison of both taste and the expectations of the medium and its audience. In terms of representation and literacy, games are *similar-but-different* to other texts. Carr writes:

To call a game a text is not to deny that it involves play, mutability, chance, interactivity or change. Being a text does not mean that something has to have materiality... (Carr, Buckingham, Burn, & Schott, 2006, p. 12).

Narrative theory helps us to link games to familiar forms, like the improvised drama piece in the English classroom:

...each narrative has two parts: a story (*histoire*), the content or chain of events (actions, happenings), plus what may be called the existents (characters, items of setting); and a discourse (*discours*), that is, the expression, the means by which the content is communicated. In simple terms, the story is the *what* in a narrative that is depicted, discourse the *how* (Chatman, 1978, p. 19).

In linking the theory to games, Diane Carr explains:

...the same “story” can give rise to many different narratives, each of which would accentuate, exclude or emphasize different things. Additionally, narrative involved the relating or communication of these events (Carr, Buckingham, Burn & Schott, 2006, p. 35).

The mode and method of communication is as much of interest to the English or media teacher as what is actually conveyed explicitly or implicitly to the intended reader or audience. When teaching a Shakespearean text to a group of 15-year-old students and guided by training and examination criteria, an English teacher will explore the language and structure of Shakespeare’s poetry. She might draw attention to how he modulates between figurative language, such as when Macbeth references the rape of Lucretia prior to his murder of Duncan, and the descriptive when characters discuss battles in *Richard III* and *Henry V* due to the limitations of staging practices of the day. This is as much a part of *Romeo and Juliet* as the details of the family feud, the love affair and the death of the “star-crossed lovers”. What is narrative and stagecraft in Shakespeare might become narrative and ludic qualities in games.

These are semiotic differences presented by a different medium. Action is conveyed on stage by text directing physical movements, in written texts by the use of verbs and in a computer games by the use of complex programming script that results in the movement of the character. Although these are very different ways of conveying something, what the reader/audience interprets from the movements might be very similar. Understanding all of these aspects is crucial to understanding the texts. The *speciality* of one type of text might even help one to explore and understand another medium. We might consider why in *Harry Potter and the Chamber of Secrets*, we see the Harry face in the film as he prepares to fight with Aragog, whereas in the game, we see the action through his eyes and in the book, the events are reported to us by the narrator, who tells us what Harry is thinking and feeling. Why and how does this affect our experience? Such questions provide students with the opportunity to make critical, cultural and creative connections, and to develop their understanding and concept of literacy so as to involve producers and audiences as well as texts themselves.

MEDIA LITERACY, GAME LITERACY

In addition to the “3-Cs” social functions model, media literacy has developed its own modes of critical analysis, which are applicable to games literacy. The conceptual model of media education focuses on the relationship between the text, audience and institutions. Whilst it is the case that one might be able to look at a game and explore the *authors* of such a text, there is just as much work to be done, for example, on “the ways in which the media industries are represented in the packaging of games.” (Carr,

Buckingham, Burn & Schott, 2006, p. 113). Similarly, one might look at the people who play games and how the games are adapted to suit their tastes and desires, as the English teacher might guide students to consider the effect of the intended audience on the writing of a poem.

As with other English and media texts, a game can be *read*. Students can be taught to question and explore how games are *read* by readers. They might consider how the *cut-scenes* in *Harry Potter and the Chamber of Secrets* (2002) reveal the story to us and teach us what to do in the game. Through a detailed study of a character, such as Lara Croft, they might question who the game is aimed at and consider whether she represents empowerment or subjugation of women. Focusing on role-playing games (RPG) and action adventure games, where there is most overlap with the features of other texts, makes this connection stronger:

We are particularly interested in these genres, because such games celebrate their relationships to other media forms (cinema or comics, for instance), and clearly rely, in terms of their appeal, on the creation of complex worlds, intriguing characters and twisting narratives (Carr et al., 2006, p. 10).

As we have considered, games are also about play. There are certain consistencies in computer games that mean that students are able to be taught to identify and comment on features of the ludology of the game in the same way that they are able to be taught about the character types employed: In fact, it is the relationship between the game as a system – its representational factors – and the social dimensions of play, that is of particular interest to us (Carr et al., 2006, p. 10). The social function of games and their cultural contexts is an area that I will return to later.

The model for literacy in British schools has been carved from the English curriculum. Reading, the critical analysis of discourse in literary texts, and writing, the creative process, during which the communicative skills that have been observed, taught and practised are combined with the flair and personality of the individual student, are mutually dependent in the traditional definition of English/literacy. When Buckingham asserts that a *text* is something that is “replicable” (Carr et al, 2006, p. 12), he imposes onto the study of computer games and other media texts the need to create, produce or *write* such texts within the classroom:

To make the analogy between games and writing presumes that there are some significant elements that are shared between those media (and, by extension, by a range of other media as well). It implies that games can be analysed in terms of a kind of language – that they make meanings in ways that are similar, at least in some respects, to written language (Buckingham & Burn, 2007, p. 325).

In addition, such a claim suggests that there are a certain set of skills that can be acquired – *literacy* – that when combined with the student’s individual flair and personality can *write* a computer game: the creative dimension of games literacy.

Since most games are a complex mixture of design and detailed programming, it is beyond most teachers to provide such an experience in the classroom. Game editing software, such as level editors and specifically the Immersive Education product *MissionMaker* (2006), provide a solution.

The flexibility of what can be written or created using *MissionMaker* is limited in some respects, such as character, object and set designs, but the uses of language, music and video within the game are limitless. Similarly, the narrative possibilities when students have to make decisions to combine studied generic conventions, the variable properties from the program and their own ideas for appealing to an intended audience are extensive, perhaps even infinite. In a written task in English, students are given a medium (a newspaper article, a story, a poem), an intended audience (an age group, gender, an actual person), a purpose (to persuade, to argue, to entertain). The language and formal choices that students make must therefore conform to the expectations of these areas. There are restrictions in this *creative* process, but many students find the flexibility to be original. Similarly, the imposition of the sonnet form on a poem does not limit what the student is able to do with it. Buckingham warns of an idealised and unmediated approach to creativity or as he terms it “a *Romantic* conception of creativity”, where creativity is seen in “individualistic terms, as the emanation of some kind of ‘personal vision’” (Buckingham, 2003, p. 127). Creativity is not inherent and beyond teaching, and he suggests it encompasses other social functions of interest to those that want to pursue creativity within game literacy:

There has been a growing recognition of the social, collaborative dimensions of creative production; of the complex relationships between “creative expression” and “technical skills”; and of the importance of reflection and self-evaluation (p. 128).

What students might gain from creating their own media texts is an oft-rehearsed debate in media education. *Reading* and the benefits of making sure that students are able to analyse texts is often privileged over the creative process of *writing* them. Such a model stretches back to Leavis and Thompson’s systematic approach to teaching advertising in *Culture and Environment* (1933).

Within a conceptual framework, “Much of the value of practical work lies in the fact that it allows students to explore their affective and subjective investments in the media” (Buckingham, 2003, p. 137). The production of a game allows students to reflect upon their own relationship with games, the society surrounding games and to translate theories into realities that are within their frame of reference, or as Raymond Williams would have it “the lived culture” (Williams, 1961) of the students.

The computer games course that I now teach was developed as part of the “Making Games” (2002-2006) Centre for the Study of Children, Youth and Media research project. Over 16 weeks’ worth of teaching material was developed and in three 50-minute lessons each week, students worked on games in a model that reflected cultural, critical and creative functions. Looking at *Harry Potter and the Chamber of Secrets*, as a novel, film and computer game, it examined how the texts and the organisations that are involved in their production meet the expectations and desires of their readers and audiences. Students were led through an examination and analysis of a text, images and logos from the marketing and packaging materials. Then, working as a gaming studio, the students produced a level for an action adventure game (Burn and Durran, 2007). Using *MissionMaker*, this involved making a series of choices – locations, characters and objects – and creating rules for actions that affect the player’s experience. It involved working collaboratively, socially, negotiating varying levels of experience, interest in games and technical skill.

BEYOND CRITICISM – INCORPORATING CULTURE AND CREATIVITY

Since that time, I felt that the course has become culturally and creatively impoverished. It has been assimilated into the media curriculum for Year 8 students, which is delivered through two, 50-minute lessons each week for a total of nine weeks. Students consider “What is a game?”, explore rules and their function, the history of computer games, characters and narrative structure and design, and produce a level for a computer game. Many levels are unfinished, as the creative aspect of the course is left until the end. Pressure to chart progression and to report to parents has often led to short contained tasks from the original scheme, that can be measured against assessment criteria being privileged – creating a short game with rules, doors and a speaking character or even the packaging of the game. Some students, who simply include all the details that they have been shown using the skills of recall, which features as a lower-order skill in Bloom’s cognitive domain (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956), might do better than those who do not follow the instruction of the task and reorganise the taught elements into a new product. Significantly, a revised version of Bloom’s taxonomy (Anderson & Krathwohl, 2001) places *creating* as the highest level of the cognitive domain. I felt that restoring the *un-assessable* cultural and creative elements of the course, that are being squeezed out by the *assessable* critical (and competency/functional) components, provided opportunities to access this domain and more accurately reflected the social functions of literacy as demonstrated in the “3-Cs” model.

The length of the “Making Games” project allowed for small-scale activities that were not seen as leading to a final assessment. Buckingham suggests “there is an important place for the unstructured social uses of the technology – or what might well resemble aimless ‘messing around’: this kind of vital step that should be built upon, rather than avoided” (Buckingham, 2003, p. 138). The course has provided little opportunity to play or share games, rather like English, where there is little writing for enjoyment or reading of others’ work.

Similarly, there was little examination of how games form part of the gaming culture of young people. Semi-structured interviews let the researchers and teachers explore the gaming culture of the students (Burn and Durran, 2007, p. 111). Within everyday teaching, it is not practical to hold interviews, so I wanted to develop a way of allowing students to make explicit to themselves, me and the other students their relationship with games: what they played; with whom; where; to what extent – Were they casual gamers or were they involved in a gaming community?

In order to encourage students to explore their relationship with games, I postponed the lesson on defining a game that begins the course. Instead, we talked about the games that students played, whom they played games with, what they liked. We swapped ideas about how much a part of our lives they were by discussing posters and websites that we had been on to find out more about games that we were playing. I suggested that some fans even produce their own artwork and extended narratives that do not take place in the text (Carr et al., 2006, pp. 88ff). I played a PC game on the interactive whiteboard and students shouted out how I should play; they had played it before and did not think much of it nor of my gaming ability. I handed over

to them and they played *Tomb Raider: Anniversary* (2007) on, to use their words, an “antique PS2” that a colleague loaned to us.

For homework, I devised a task that I have previously used to explore students’ reading, when I wanted them to think about their relationship with books and I wanted to know about their reading habits, so that I was able to encourage them without imposing my own preferences upon them. As in the original task, I invited students to fill a blank sheet of A3 paper with words and images that dealt with what games they played, where, with whom and whether they were involved in what we decided to call *fan elements*, such as displaying posters, visiting websites or adding to the game through their own art and stories. The task also bears resemblance to what Buckingham and Sefton-Green describe in their work as “media identity posters”, the intention of which was not to provide students with new knowledge or skills:

On the contrary, it is more to encourage students to make explicit, to reformulate and to question the knowledge that they already possess (Buckingham & Sefton-Green, 1994, p. 164).

It was also to make explicit their own culture, according to Williams’ concept of the “lived culture” which “is a description of a particular way of life, which expresses certain meanings and values not only in art and learning but also in institutions and ordinary behaviour” (Williams, 1961, p. 41).

Although the task was intended to cover computer game culture, some students included board games and sports since they featured more heavily in their lives. Several of the resultant *Games and Me* posters were more than the ordinary collection of words and screen-grab images that made up the bulk of the submissions. Each in some way displayed the creativity of combining the elements that they had been presented with in a way that they had not been shown. Criticism can be seen in the language used for comparison and in the technical vocabulary that the students used. In this sense, the posters display the “3-Cs” model of media literacy and the links that the students are automatically making between the three social functions.

Gianamar’s poster (Figure 1) is a mixture of scrawly writing and quickly sketched drawings. We learn that he plays games with his sister and his grandmother. This immediately challenges my experience of computer games: in a room with a group of boys to the exclusion of females. And again:

Usually boys and girls both tend to play the same types of games. Different people tend to play different types of games e.g. some types of people would rather play board games than “shoot ‘em up” games. Sometimes this depends on the gender of the person.

Whilst acknowledging in the closing remark that gender can be a deciding factor in who plays what, he asserts that this is not his experience. He adds elsewhere:

Sometimes my sister plays Sims 2 [*The Sims 2* (2004)] and every now and then I play Sims 3 [*The Sims 3* (2009)] at my friends.

For Gianamar, there is no stigma attached to playing the same games as his sister; it is just that he plays a later version and at his friend’s house. In this same statement, is he

perhaps suggesting that his behaviour and gaming culture are influenced by whom he is playing with and where?

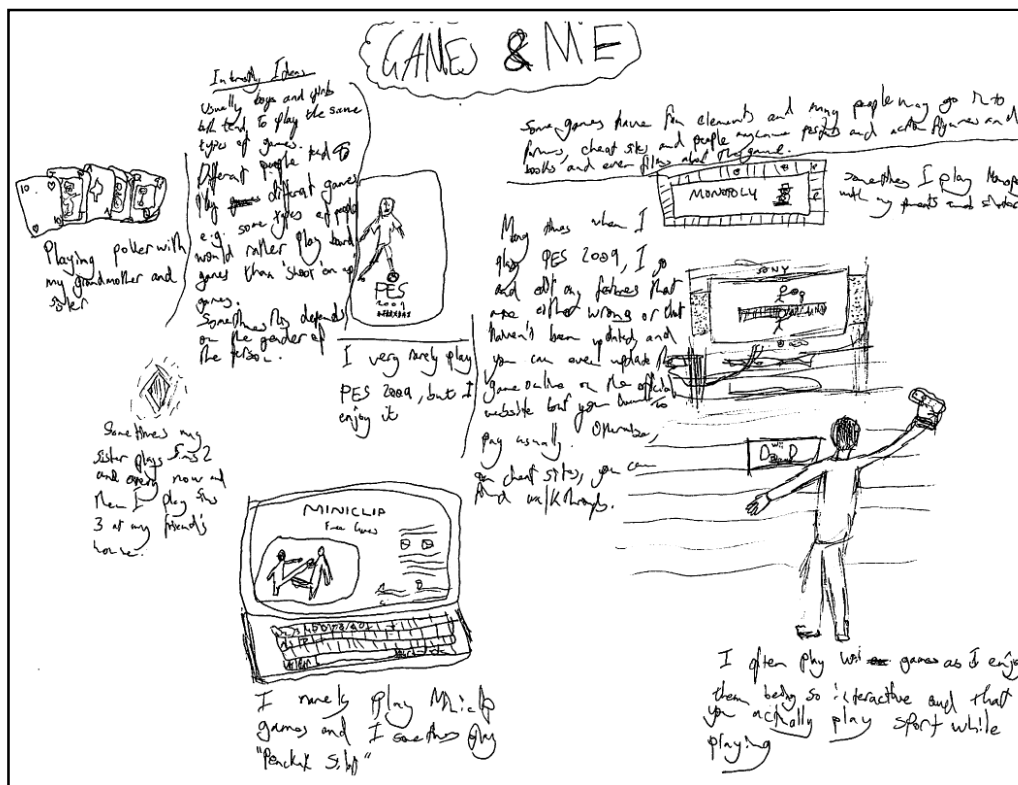


Figure 1: Gianamar's *Games and Me* Poster

Gianamar seems rather more informed about the theory of games than I have ever really considered when teaching students about games. Certainly, he has more of a gaming culture than I do. Whilst I am conversant and proficient at *MissionMaker*, he talks like an expert game editor when he writes:

Many times when I play PES 2009 [*Pro Evolution Soccer 2009* (2008)], I go and edit any features that are either wrong or that haven't been updated, and you can even update the game online on the official website but you have to pay usually. Otherwise, on cheat sites, you can find walk throughs.

And this is from a game that he “rarely plays” but enjoys. This has implications for the course, since Gianamar is referencing cultural tastes and distinctions (Bourdieu, 1984) in what he is saying here, which are not dealt with in the current curriculum. Perhaps, too, there is evidence that he is aware of a perceived hierarchy in culture and that he does not want to give his English teacher the wrong idea about his cultural preferences. His poster is littered with qualifying phrases – “rarely”, “very rarely”, “every now and then”, “sometimes”. He talks in generalist terms about “many people” who visit fan sites, but despite his knowledge does not say that he does. He is certain that he plays *Monopoly* with his family, “often plays Wii”, as “you actually play sport while playing” and surprisingly is happy to admit that he plays poker with his grandmother.

A *games literacy* might need to bring these ideas out into the open. Are students storing away untapped knowledge of culture and society's perceptions toward it, which they are not bringing to the course?

The course again fails to acknowledge the player-culture elements that Gianamar mentions. Nor is there a recognition or discussion of the issues that are signalled in his use of "official" in opposition to "cheat" when taking about the websites that support game play. Rather than being dupes of the media, it seems that the culture that students are immersed in would provide possibilities here for the exploration of intellectual property, merchandising and their implications and the effects that these have on the appearance and modes of communication on the websites. How might we exploit this *cultural capital* (Bourdieu, 1984) within games literacy?

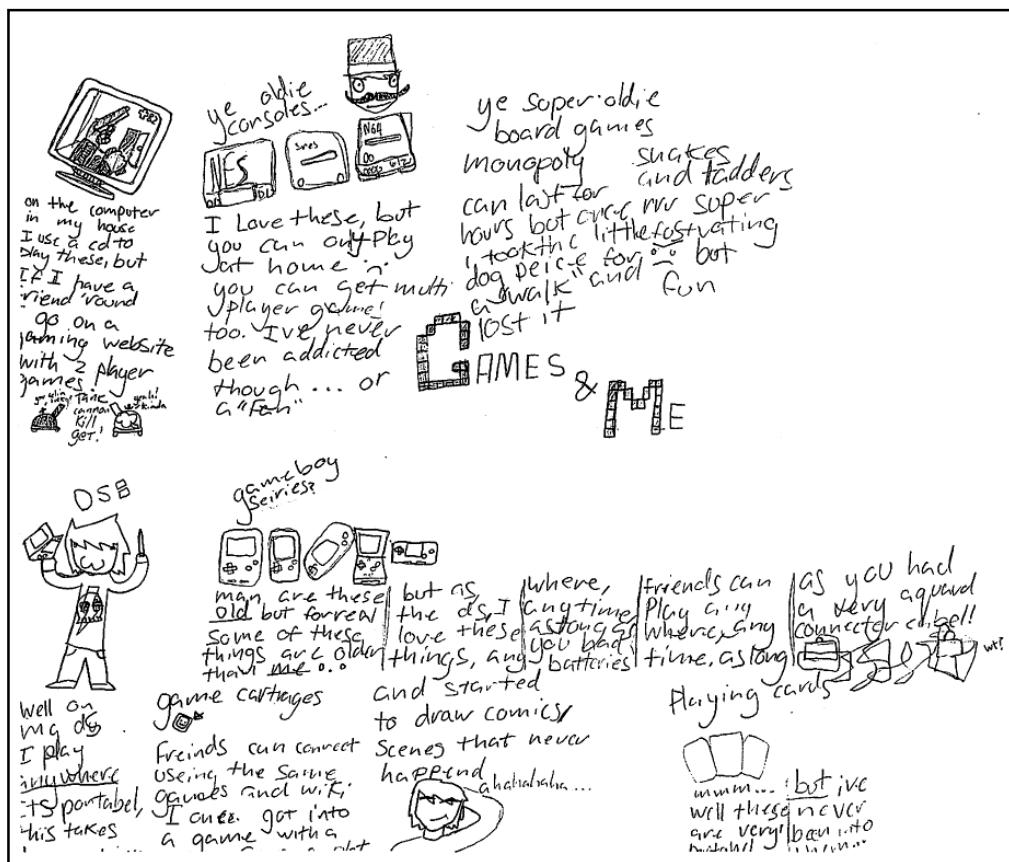


Figure 2: Anonymous *Games and Me* Poster

Another student that did not put his or her name to the work (Figure 2) writes about the Nintendo DS:

Well on my ds I play anywhere Its portable, this takes teeny tiny game cartrages [inserts a small drawing of the cartridge] Friends can connect using the same games and wiki I once got into a game with a very strong plot and started to draw comics/ scenes that never happened ahahahaha... [inserts a drawing a smiling person, who looks like an avatar from a game]

Here again the range of the cultural and creative references is greater than anticipated. Students are engaging with games socially, virtually and artistically.

The cultural dimension of students, their experiences of gaming culture as gamers and how this affects the level of their learning must be considered in greater depth and in a greater variety of ways. In a short space of time, this student reveals that her/his cultural aspect of games extends across the internet or possibly Bluetooth – “connect using the same games” – and that s/he engages creatively with the content of the games to produce other media texts: the “wiki”. Although not developed here, the possibilities for what is discussed, debated or collaboratively written about on this wiki is considerable and touches on all the functions of games literacy with which we are concerned. Many of these sites offer cheats, walkthroughs and other details that are focused on the ludic elements of the games, whilst more still might critically discuss the development of characters and narratives (Carr et al., 2006, pp. 88ff). The implication that this is done socially also challenges an accepted view of games as solitary pursuits and provides evidence of *informal* learning within “a ‘community of practice’ that collectively pursues the activity” (Carr et al., 2006, p. 132).

Developing an idea of a student’s gaming experience meant that I was in a better position to group students and assign roles to develop *communities of practice* within the class, which they might already or may in the future belong to outside of the classroom. This was intended to be more proximate to students’ experiences than in the previous incarnation of the course where an imaginary gaming studio was set up. Students would decide upon the name of the studio and develop the game as a small company working from their school in Cambridge. As this was beyond the experience of many of the students, it required more intervention and instruction from the teacher than is perhaps desirable. At regular intervals, students would be told that they needed to be moving on to the next stage of design or the next stage of marketing and there is a danger that this might diminish the creative and cultural input of the students.

As an English teacher, I am aware of the differences between students’ abilities and the relative *ages* of their reading and writing abilities, reflecting their knowledge and skill in these areas. The information from the *Games and Me* posters helped me to develop a sense of what we might term *gaming age*. Like a sports teacher with a group that covers absolute beginners to future professional sports people, I was able to assign roles that would extend and develop all students. Those with considerable experience would *chair* game developing teams and informally teach the other students. Those with little experience worked as *researchers* to make knowledge and skills that were implicit for some, explicit for the group. Eventually, I hope that those with playing experience but with little knowledge of wider player culture might as *scribes* develop wikis and blogs using freeware to reflect upon and share their experiences of developing a game level with others in the group, and perhaps further via the internet.

With finite time available for this course and to incorporate more creative activities, some aspects of the original course had to be lost. The history of games, whilst appearing to fit into the cultural function of games literacy, increasingly seemed to promote a *canon* of games, which I wanted to avoid. Also, it was so removed from the texts – students did not play the games but looked at screen-grabs – it felt like drawing the Globe Theatre when studying *Macbeth*, without making any connections to its influence on staging or on the language of the play. Alternatively, the *Games and Me* poster activity and playing the games together in class had provided us with a

wealth of cultural ideas, which students might share and increasingly understand nuanced influences.

Adaptations to the course focused on exploring the culture of the students as creators and critics. Instead of creating a game for an imaginary intended audience, they made games for each other. Game-developing teams split; some played the games of others, whilst some remained to watch the playing. Faults with the games were spotted by those that had made the game, whilst *in-game* and *post-game* feedback provided students with an immediate sense of how enjoyable and successful their game was. One group was able to see that, although they knew and were familiar with the route through their game that would lead to success, there was no *signposting* or narrative markers for the player, and their classmates who were playing the game had no idea how to get through the game. Another group found that its game was too easy. Although they had spent a long time on adding in narrative features, there were not enough *ludic* distractions to prevent the player from going straight to the end.

Finally, teams had to report back when they were reunited on what they had learned about their own game and from others' games. This task encouraged students to draw upon what was taught in the course, but also on *informal* learning and knowledge about games. At the same time, they articulated their thoughts and developed their speaking and listening skills. They spoke about the playability and the responses of the players. They fed in details about the ease or difficulty and this led onto conversations about what and how to modify the game.

Developing such opportunities for *structured* play meant that students' experience of creativity was not reproduction, but a choice and combination of elements. A suitable analogy might be the difference between dance teachers. The class of the first teacher repeats what has been demonstrated to them over and over until they produce a perfect performance, but in spite of this *art*, the students have learned little beyond the steps. They are entirely reliant upon the teacher and they are no more *dancers* than they were before they were taught the routine. Another teacher demonstrates a number of motifs and transitions, which the students practise. She then explains how repetition and variation of these motifs might be combined to create a routine. Finally, she provides students with time to practise. In performance, the latter teacher's students may not provide a polished performance, but they are more conversant with the principles of dance and they can return to these themselves to create their own work and apply what they have learned in other cultural contexts. The challenge for those teaching game literacy is to redefine English and media lessons to provide these conditions.

DEVELOPING LITERACY

The modifications made to the games course were about approaches to learning and to draw out the principles of *games literacy*. Students who play games are not automatically equipped to critically, culturally and creatively respond to these texts. Students who can read are not automatically great writers. There are aspects of the *reading* and *writing* of computer games where some students are more advanced than their teachers and yet other aspects where almost all are not. In the study of a novel, a teacher may provide all the critical and cultural resources that students need, but with

living texts such as computer games, teachers must find ways to engage with students in a way that is part of their lived culture. They must find activities that explore and then exploit the cultural capital of students and help them work toward the creation of games. These activities rehearse and scaffold critical, cultural and creative ideas and concepts to make explicit what is implicit and to extend students' beyond their experiences, so that they are able to apply them independently in other contexts displaying and developing their literacy.

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