English Teaching: Practice and Critique May, 2005, Volume 4, Number 1
http://education.waikato.ac.nz/research/files/etpc/2004v4n1art3.pdf pp. 40-59

The uses of literacy in studying computer games: Comparing students' oral and visual representations of games

CAROLINE PELLETIER
The Knowledge Lab, Centre for the Study of Children, Youth and Media, Institute of Education, University of London

ABSTRACT: This paper compares the oral and visual representations which 12 to 13-year-old students produced in studying computer games as part of an English and Media course. It presents the arguments for studying multimodal texts as part of a literacy curriculum and then provides an overview of the games course devised by teachers and researchers. The analysis of a group interview and a set of six drawings is designed to highlight the relationship between knowledge of games gained outside the classroom and knowledge developed through formal study; the role of gender in students' interpretations of games; and the literacy practices manifested in different forms of texts, in particular visual texts. Judith Butler's notion of performativity is used alongside a multimodal theory of sign-making to argue that the way students interpret and produce texts is socially motivated to achieve a certain subjectivity within the context of the classroom and the peer group. The conclusion examines implications for the study of games in English and Media classrooms, particularly with regard to the teaching of genre.

KEYWORDS: Computer games, gender, media education, media production, multimodality, performativity, popular culture, social semiotics, visual literacy.

As multimodal resources with interactive narrative structures, computer games have recently attracted the attention of literacy researchers looking to introduce a wider lexicon of texts into the English and Media classroom (Beavis, 1998; Burn, 2004; Burn and Parker, 2003). To date, however, there has been little research into how young people interpret the semiotic principles at work in games and the kinds of social functions students aim to achieve in producing texts relating to games. This paper begins to investigate some of these issues by exploring the representations which Year 8 (12 to 13-year-old) school students produced in discussing and designing computer games in an English and Media course. This can inform an understanding of the role of games in children's culture and the implications for the study of games in media education.

The paper focuses on two kinds of data: a group interview carried out after class, and a set of drawings produced as homework. Observations made during class sessions and questionnaire data are also considered. My aim was to explore three questions: What is the relationship between knowledge of games gained outside the classroom and knowledge developed through formal study; what role does gender play in the interpretation of games texts? and How might literacy manifest itself across different forms of texts, in particular visual texts? The research reviewed here can only begin to address these issues, but it is clear that these are very much inter-related rather than discrete.

The notion of performativity, as initially developed by J.L. Austin (1975), and more recently elaborated by Judith Butler (1993; 1999a; 1999b), seems particularly useful in tackling these questions. Butler argues that subjects are constituted not only through social but also discursive relations. Language does not simply identify, it is a form of social action – it brings into being what it names, and in this sense, it is performative. So, for example, we position ourselves in relation to others through language and thereby achieve a certain subjectivity. This idea is not new, forming as it does the basis of much discourse analysis, but it has traditionally been applied mainly to verbal language. By taking a multimodal view of communication, however, the notion of performativity enables us to examine how students establish subject positions not only through verbal language but also through other modes, such as visual design.

Butler's work is particularly useful for examining performativity in the constitution of gender, and this is what I will examine in this paper. However, the focus on gender is not intended to exclude other considerations, such as age or socio-economic background. Rather it serves to reinforce the point that literacy is not a purely cognitive skill, but rather a social practice through which relations with others are established. In this research, gender proved particularly prominent, although it was certainly not students' only consideration; in other contexts, different aspects of students' identity may have come more strongly to the fore.

The research has emerged from the "Making Games" project, which is a collaboration between the Centre for the Study of Children, Youth and Media and Immersive Education. Funded for three years (2003-2006) through the Paccit Link programme, the project is investigating how computer games might be studied in English and Media Studies classrooms. It is also developing a game-authoring tool that enables 11 to 14-year-olds to create their own games. The analogy here is with reading and writing: How can students learn to analyse (read) games as well as produce (write) them? The literature on games and gender has raised concerns about the masculine discourses in games, which is why we are interested in the production and representation of gender in students' texts.

WHY STUDY GAMES IN SCHOOL

There are two main arguments for a concept of literacy that encompasses multimodal texts (Barton *et al*., 2000; Beavis, 1998; Cope and Kalantzis, 2000; Kress and van Leeuwen, 2001). The first is that globalization is sustaining ever-greater levels of cultural and linguistic diversity, so that it is no longer possible to maintain belief in a standard national language. The second relates to the nature of contemporary texts, which increasingly combine modes and media, making definitions of literacy based on verbal language alone increasingly inadequate. In combination, these two developments have led to a re-formulation of the purpose of literacy, which focuses on building students' competencies in reading and writing the kinds of multimodal texts with which they engage habitually rather than seeking to invalidate these in favour of some narrow and divisive notion of cultural or ideological value (Buckingham, 1993a).

The debate about multiliteracies is therefore polemical, concerned with how schools should respond to technological and economic change and how this will contribute to the formation of students' culture and identity. It is also part of a wider "social turn" in definitions of literacy, which emphasizes the social functions of literacy rather than the acquisition of an abstract set of competences (Gee, 2000). Multiliteracies is not a reworked version of Gardner's multiple intelligences. Its aim is not to match the type of literacy to the type of child, but to support a broader understanding of reading and writing which not only encompasses a wider lexicon of texts and media but also positions them in relation to social institutions and power relations.

The educational argument for studying games is based on extending the notion of multiliteracies to gaming, to examine the literacy practices associated with computer games and how young people might become more competent consumers and producers of such media. The founding manifesto for multiliteracies dates back to 1996 (New London Group, 1996), but it could be argued that it extended the reach of definitions of literacy already employed in media education, where there have been endeavours to define various kinds of media literacies, such as TV, visual or cine literacy (Buckingham, 1993a; 1993b). Using the same term for these different modes and media is problematic, as Kress (1997) points out, but it makes for a useful analogy in allowing us to examine the affordances for meaning-making in particular texts and technologies and how these are transformed through the process of production, distribution and reception. In this paper, my aim is not to identify the elements of "game literacy", but to suggest how games are interpreted and transformed through the socially-situated process of textual production.

THE FIELD WORK

The research described here took place over a six-week period in November and December 2003. Researchers collaborated with an English teacher at Parkside Community College in Cambridge (UK) to develop a games course for a Year 8 group. The course took place as part of a media module within an English, Media and ICT programme, and was structured around three concepts central to media education: texts, audiences and institutions (Buckingham, 2003). Games as texts were analysed on two levels. Firstly, in terms of their components, identifying what games consist of (objectives, challenges, rules, and so on), and secondly in terms of their representations (that is, how games are classified into genres and the conventionalized ways in which representations convey meaning). Two kinds of genres were considered; the first relate specifically to games, such as first person shooter, and the second to the representations of sci-fi worlds. This was because we wanted students to set the game they designed in a sci-fi setting, for reasons relating to the development of the authoring software.

Classifying games in these two ways allowed us to frame games as media with their own specific set of symbolic resources as well as cross-media cultural products that draw on players' experience of other media forms to make sense. Audiences and the marketing messages which appeal to them were considered by analysing the cover of the game *Harry Potter and the Chamber of Secrets*, and how the pleasures which the game promised were realized in students' own playing experience. By examining the

various logos on the cover, the institutions and industries involved in the production, distribution and regulation of games were also brought into the discussion.

Our aim was not to distance students from the pleasures of gaming or enable them to be more critical of the games industry and its cross-media interests, but to develop students' understanding of the processes which sustain the production of games, as well as how audiences interpret and incorporate them into their social relationships. Framed within a media education paradigm which emphasizes both critique and pleasure, our approach did not seek to inoculate students against the dangers of media, or teach them to discriminate between high and popular cultural products. Rather, we aimed to study games as representational and symbolic systems whose semiotics are related to the audiences which interpret them, the institutions which produce them and the cultural context in which these three elements transform themselves through interaction.

The two types of data analysed here were selected to compare not only different modes but also different contexts: the informal, after-school group discussion and the set homework. Whereas the first was carried out relatively informally, the second fitted into an educational programme consisting of a curriculum and an explicit pedagogy. This is an imperfect approximation for comparing knowledge of games inside and outside the classroom; the interview took place on school premises and among classmates rather than friends. However, it was less structured than the pedagogic programme we developed for classroom-based activities and gives us some insight into students' familiarity with games outside of school.

EXPLORING LITERACY IN AN ORAL TEXT: THE GROUP INTERVIEW

In class, in the second week of the games course, we asked for six volunteers who were keen game players and could stay after school for a 15-minute interview. The first three boys and girls who put up their hands were selected. In the interview room, the three girls sat next to each other, as did the boys. There was one male and one female interviewers. The questions were designed to elicit information on the games students played and how they evaluated their design.

1.	*F interviewer*	What kind of computer games do you play?
2.	*M interviewer*	Shall we go straight round? Yeah.
3.	*Sarah*	I just play…I don't really play action, I just play things like
4.		*The Sims*[1] and just things that you can rule their lives and just
5.		make…Just have fun with.
6.	*Kate*	And I play with *The Sims* as well.
7.	*Jo*	And me. Yeah. I play *The Sims* on my… My dad has a
8.		different range of… he has our computer and a PlayStation[2]
9.		and when I'm with my dad I play like…usually
10.		*Lord of the Rings* and *Harry Potter* and sort of

[1] *The Sims* is a game in which players manage resources to meet the needs of simulated characters, who for example, need feeding, washing and putting to bed. The game has a domestic setting.

[2] PlayStation is a games console, a dedicated technology for playing video games and which plugs into the TV. The three major games consoles on the market today are (excluding handheld machines): PlayStation 2, Game Cube and Xbox. The first version of the PlayStation was called PlayStation 1.

11.		known games, like, not sort of… Games that
12.		have got books as well or films or TV programmes that I
13.		know of.
14.	*F interviewer*	Is that why you choose them?
15.	*Jo*	Sort of. I'm quite fussy and when I do read books, I
16.		can't read books that I haven't heard of. And so, that's
17.		probably why I choose them.

The three female students stated they played on the desktop computer (PC). When asked whether they had consoles at home, Sarah said she had a PlayStation on which she played racing games.

We then moved on:

18.	*Joshua*	I play Action Adventure, Shoot 'em Ups,
19.		fighting games, on PS2[3].
20.	*F interviewer*	Have you tried any other platforms as well?
21.	*Joshua*	Like *The Sims*?
22.	*F interviewer*	Like the Xbox or PC?
23.	*Joshua*	Oh I've played on the XBox and the Game Cube,
24.		Playstation 1.
25.	*M interviewer*	So you've not played on a PC?
26.	*Joshua*	Well, I haven't really got a PC. I have consoles instead.
27.	*Simon*	I play adventure and strategy games. I hate racing games.
28.		*Formula One* is probably the only racing game
29.		I like. I have a PC if the PlayStation isn't working.
30.	*M interviewer*	Can you name the titles of some games you
31.		play?
32.	*Simon*	*Spiderman. Crash Bandicoot. Silent Hill. Silent Hill*
33.		is a horror game. I like adventure for my PC. We get to
34.		buy some from the internet.
35.	*M interviewer*	Do you play any online games?
36.	*Simon*	Yeah. Loads. *Age of Empires*. Some take up one
37.		fifth of my computer space, they are so huge. And *Star*
38.		*Quest*, and I've forgotten what other games
39.		I've got.
40.	*Jak*	I like more strategy computer games like *Red Alert*
41.		and *Age of Empires* because I like the idea of
42.		building moon bases, going out killing people
43.		and that. Yeah.
44.	*Simon*	Yeah.
45.	*Jak*	I play *Red Alert* on PC, which is good. It's better than
46.		PlayStation because it's got better graphics.
47.		You've got more options on what you can
48.		play. And I like extreme sport games as well. I
49.		like *Tony Hawks*[4].

These stated preferences and experiences appear to confirm earlier research, with access, preferences and choice of platform differentiated by gender (Cassell and Jenkins, 2000; Kafai, 1996). The girls' preferences support arguments that girls tend to play "improving games" in the home (mainly on the PC), with parents (and

[3] PS2 is the abbreviated form of the PlayStation 2
[4] *Tony Hawks* is a skateboarding game.

particularly fathers) distancing their daughters from "masculine" technologies and interests (Thomas and Walkerdine, 2000). However, there are contradictions in the content of these responses. These become more pronounced if we look across the whole interview and bring in other data. The table below (Table 1) provides a summary:

Table 1. Students' statements of game preferences, compared across the group interview and with questionnaire data collected at the end of term

	Sarah	**Jo**	**Kate**	**Joshua**	**Simon**	**Jak**
Interview 1st response	Plays *The Sims* and other simulations	Plays *The Sims*	Plays *The Sims*	Plays action and adventure games on several games consoles – not on the PC	Plays adventure and strategy on console, only plays on PC if Play-station isn't working	Plays strategy games
2nd response	Plays racing games on the PlayStation	*The Sims* is dull as all about the same thing – games need more variety	Later interview: plays "*The Sims* and *Harry Potter* and other things" – which belong to her father and her friends.	Has played on the PC	Plays adventure on PC	Plays one particular game on PC. Plays extreme sports games
3rd response	Prefers the PlayStation to the PC, so prefers playing *Tony Hawk*s rather than *The Sims*					
4th response	Says it is difficult to find games aimed at her, so plays her brother's racing games					
5th response	"I think some games are quite good when it's all about the same thing like fighting and killing"					
6th response	Likes action games and games with a coherent design					
Questionnaire Favourite game	*GTA Vice City* [a shooting and driving game]	*Tomb-raider* [an adventure game] Owns a Gameboy	N/A	N/A	Favourite games include platform games	Favourite games include *Spiro* [adventure game]

The table highlights that the kinds of games with which students claim familiarity, as well as the evaluations they make of those texts, shifts over the course of the interview and the whole research period, particularly in Sarah's case. It is interesting to note that whereas at the start of the interview, she refers to games by their content (lines 4 and 5), by the end of the interview her judgments relate to quality of design (see 5th response in the table), irrespective of the content. The variations in students'

statements of preferences and judgment criteria suggest that the way students interpret their game-playing experience outside school alters according to the functions of their representations within the group interview. This becomes more apparent if we analyse the patterns of discourse.

Analysing students' discourse

In making the first contribution to the discussion, Sarah presents her game-playing in terms of difference – first pointing out what it is not. The repeated use of the word "just" (lines 3-5) works as a disclaimer, which presents her preferences in terms of a carefully chosen selection. Similarly, the "just" in "just have fun with" (line 5) is a modality marker which portrays her own game-playing as lighthearted and wholesome. Her remarks divide games, and by implication game players, into two kinds: *The Sims* and other simulation games with which people have fun; and "action" games, associated with other kinds of motives.

When Jo goes on to mention other games apart from *The Sims* (which the two girls have already mentioned), she distances them from her own personal gaming habits by saying she only plays them with her father (line 9), as part of her wider engagement with media, and upon the recommendation of others (line 16). This positions her game-playing as a social activity, relating to social interactions away from the console, and therefore not as a lonely or obsessive interest. Jo's remarks, like Sarah's, construct games as divided into two kinds; those whose quality is ensured by others (other media, other people) and those that have no such "independent" guarantee. Games players are either of the kind carefully to select games or to play indiscriminately. Game platforms are also divided into two kinds. Although Jo's father is portrayed as the owner of both the computer and the console, the use of "our" (line 8) presents the PC as the family's technology but the console ("a", line 8) as her father's personal platform.

The use of "and" at the beginning of Kate's and Jo's responses (lines 6 and 7) suggests a desire to emphasise similarity of tastes across all three students and thereby establish a social relation between them[5]. It would seem to be aimed at creating a norm, based on gender lines. The logic of the dichotomies which Sarah and Jo establish is not contained in the oppositions themselves but in the values attached to them, which reflect certain popularly held notions surrounding games and gender – games are boys' toys, played by anti-social and addicted geeks on dedicated technologies. This portrayal of games cannot simply be understood in terms of the girls' pattern of access to games – rather the meanings they attach to games and game-play are constructed to present a particular identity, defined in the first part of this interview in terms of gender.

To be effective, subject positions must compel collective recognition (Butler, 1999a). By positioning themselves in opposition to the girls' preferences, the boys bolster the dichotomous classification system and so constitute their own positions as male. However, they also seek to protect themselves from some of the negative discourses surrounding men and gaming.

[5] I am grateful to Andrew Burn for this point.

Joshua, Simon and Jak describe their gaming habits in terms of genres (lines 18, 19, 27, 28, 33, 40, 48). This identifies their experience in terms of a broad range of individual titles, many of which the students may not have played. It also displays a vocabulary that is particular to games; games are evaluated on criteria which is specific to their format rather than against other media. The genre categories referred to are those used by the games industry to market titles at different kinds of audiences and give some indication of their playing potential. In using them, the boys identify themselves as a target audience, as gamers, and therefore as authorities on the subject of the interview.

The use of genre categories places emphasis on quantity (see Simon's remark line 36), with access presented as unrestricted – the "we" in line 33 presents Simon's game playing activity as a peer-based activity, in opposition to the supervision from adults which Jo describes, and also to her suggestion that game players are anti-social. Indicators of taste and judgment are introduced to underline that discrimination is nevertheless being exercised, pointing to the speakers' sophisticated knowledge and expertise. Simon mentions the single genre that he does not like whilst finding one exception within it (line 28) and Jak argues for the special technical qualities of PC gaming (line 46). Simon's confirmation of Jak's tastes (line 44) plays a similar role the girls' use of "and" (lines 6 and 7), presenting tastes as shared among the three boys.

The boys do not present gaming tastes that may be seen to appeal to women (platform and adventure games), although these are mentioned in their questionnaires. Joshua and Simon initially both dismiss the PC as a legitimate gaming platform (Joshua assumes I refer to *The Sims* when I ask if he has played on a PC).

The students deploy similar discursive strategies to construct their identities as game players. Their positioning is temporal, as the shift in answers demonstrates. Knowledge of games is displayed to the extent that it enhances desired positions over the course of the interview. When the discussion shifts to how games are designed, Sarah redefines her preferences in terms of PlayStation games and abjures the PC, so as to maintain her position as expert in a new context. This takes place during an exchange with Joshua, who is the recognized class gaming expert. It is by agreeing with him and then starting a discussion about the merits of different platforms that Sarah is able to display knowledge of game design.

GENRE AS SOCIAL INTERACTION

Students position themselves as subjects often by classifying games into two or more genres. Although these genres change over the course of the interview, there is one general pattern. The three boys consistently use terminology associated with the industry, game reviews and web sites, where games tend to be celebrated and are the main subject of discussion. The genre categories used by the three girls are less conventional. In the lesson immediately before this interview, the teacher had examined the characteristics of different game genres. Although these students could therefore be assumed to recognise the dominant genre definitions, they choose not to position their game-playing in these categories.

If we take Hodge and Kress' (1988) definition of genre as a form of social interaction that establishes conventions in the representational practices of a group of people, the students' responses can be explained in terms of where they position themselves in relation to that group of people; namely, people who make, buy and play games. The three boys demonstrate high affinity with a method of classification that is in part derived from publications that market and evaluate games, and in doing so uphold and identify themselves with the social arrangements that these interests enact. In using a different method of classification, and thereby showing low affinity, the three girls align their interests against a different social configuration.

However, students' representations of genre conventions are unstable. The different and often contradictory way they evaluate the design of games indicates that the demonstrated level of affinity is also intended to achieve a certain identity within the group. The issue is therefore not only how students "read" genre conventions in abstract, but rather how their readings position them in certain ways at particular times. This is particularly clear when students discuss how games should be put together. Both Jo and Sarah recommend that games need more variety, although Sarah also emphasizes the importance of design coherence. The three boys, however, describe their own proposed approach to the making of games in terms of replicating existing models. So whereas the girls position themselves as critics of existing genre conventions, the boys portray themselves as imitators. The girls do not critique conventions *per se*, however, but suggest genres should be mixed and matched more. It seems likely therefore that such conventions are not questioned on the basis of design principles but within a context where gender identity is achieved by taking a particular stance on gaming.

Criticizing games for their lack of variety is a familiar trope, often repeated in gaming literature from web sites to academic books, with the blame often placed on conservative publishers unwilling to venture beyond existing winning formulas. Rejecting genre conventions is therefore a common way of signaling critical distance from institutionalized authority, and is not inherently associated with gender positions. In class, subverting conventions was performed for humorous effect by mixed groups of students, often to demonstrate a rebellious stance towards the teacher and researchers. In this context, the adults were positioned as authorities; in the interview situation, it was the boys. The way students interpret and evaluate textual conventions, therefore, is not some reflection of an inner essence, but about claiming particular social affiliations.

What is perhaps striking is how mobile these affiliations are. The way these students represent their gaming experience and create meaning through an oral text highlights the performative dimension of literacy (Butler, 1993; 1994; 1999a; 1999b). The students in this interview constitute their social identities discursively. Their "readings" of games are not determined prior to the interview but enacted at particular times to achieve certain purposes and bring forth these identities. This does not mean that their interpretations are freely chosen, in a voluntaristic way. They are shaped by a number of interlocking discourses concerning gender, games and school, as well as the disparity in levels of access to games. But the ways in which these discourses are invoked are shaped by students' motives.

It is important to distinguish between performance and performativity. Students are not putting on a show to conceal what they really think; rather it is through speech acts, through processes of interpretation and meaning-making, that they produce themselves as subjects. Butler's argument transforms literacy from an epistemological problem to one focused on practices of signification. It also suggests that literacy is not a state we attain, but rather a regulated process of repetition – the meanings and representations we create from texts are not established through single acts but performed repeatedly, and potentially with many variations, as the different subject positions in this interview begin to suggest. Literacy from this perspective is not an ability we posses cognitively once and for all, but embedded in and transformed through social relationships.

The concept of performativity provides a new perspective on some of the issues concerning gender, gaming and literacy. The "problem" of gender and literacy is traditionally defined as follows: readings of texts are gendered in so far as the reader's identity is fixed within a (socially constructed) gender framework before they come to the text (Millard, 1997; Rowan *et al*, 2002). This argument also sustains much of the early research on gender and computer games, with women said to want more bright colours and social interaction, and men often portrayed as favouring violence. More recent research has tended to emphasise that gender differences are becoming much less pronounced, with interest in games no longer determined on this basis (Bryce and Rutter, 2003). This may be the current trend. It does not, however, prevent games from being used to constitute gender. In this interview, Sarah and Joshua, for example, may have played and enjoyed many of the same games. But the representations they produce of their gaming experience are one of the ways in which they signify their gender (as well as their age, expertise, etc), to themselves and to others. These representations are, however, unstable. Variations are brought in through repetition. This allows us to make sense of patterns which re-occur as well as new kinds of representations.

The notion of performativity can sit well alongside a multimodal view of literacy. Both are interested in the way tools for representation are already signified but continue to signify through use, as they circulate within different social contexts. The following analysis of visual data endeavours to illustrate the same point.

EXPLORING LITERACY IN VISUAL TEXTS: SCREENSHOT DRAWINGS

As class homework in the third week of the games course, students were asked to design a screenshot from a game. They were given two design specifications: it had to fit within the role-playing genre and should have a sci-fi setting. The conventions from each genre were reviewed in class, by examining and classifying game screenshots as well as excerpts from sci-fi films. In contrast with the interview, these visual designs were integrated into the course on games – they were given as homework, and followed on from classwork.

Orr Vered (1998) argues that differences in home environments and access to games can to some extent be suppressed by the normalizing rules and expectations of the classroom, making for an egalitarian ideology which overrides gender divisions. Certainly, whereas gender was repeatedly raised in the interview without prompting

by the interviewers, the students never chose to discuss it in the classroom. Yet the visual discourses in the screenshots repeat some of those from the interview, indicating that although the students contributed to the collective maintenance of a gender-blind ideology, they undermined the latter in their individual work. This at least raises some question about schools' ability to eradicate the dynamics and power struggles that characterize the production and reception of media across society. It also has implications for how media education courses might be designed, both to recognize issues of power outside of the classroom as well as to address them in the curriculum.

I will focus on the screenshots produced by six students, two of whom were also in the group interview. The drawings were selected from around twenty on the basis that they appeared the most finished and polished. We also wanted a gender balance. The analysis draws on *Reading images: The grammar of visual design*, in which Kress and van Leeuwen (1996) provide a framework to analyse the semiotic resources available in visual data. The drawings could be interpreted in several ways, and here I will provide what I believe to be the most convincing account. However, how to interpret and evaluate production work in media education is a familiar question that also applies to the kinds of representations that might arise in the study of computer games.

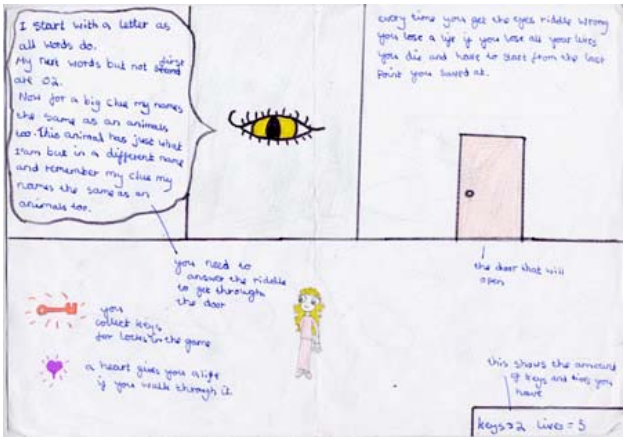

Figure 1. Kate's screenshot

Figure 2: Liz's screenshot

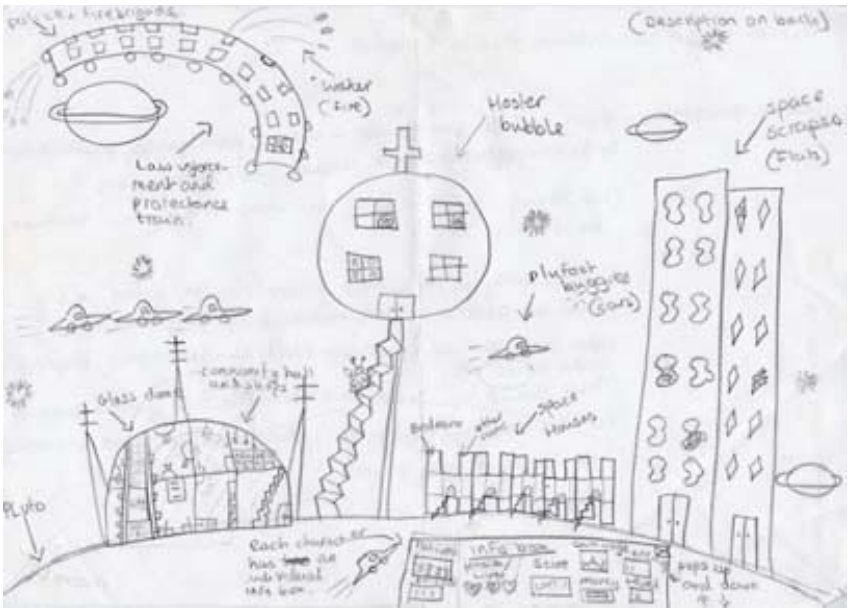

Figure 3: Janet's screenshot

Figure 4: Jak's screenshot

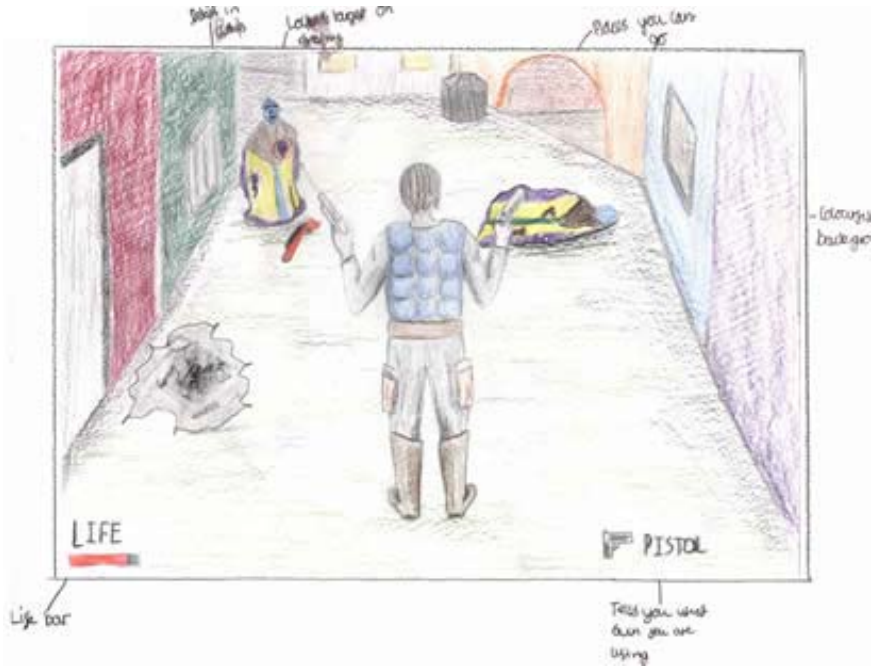

Figure 5: Tom's screenshot

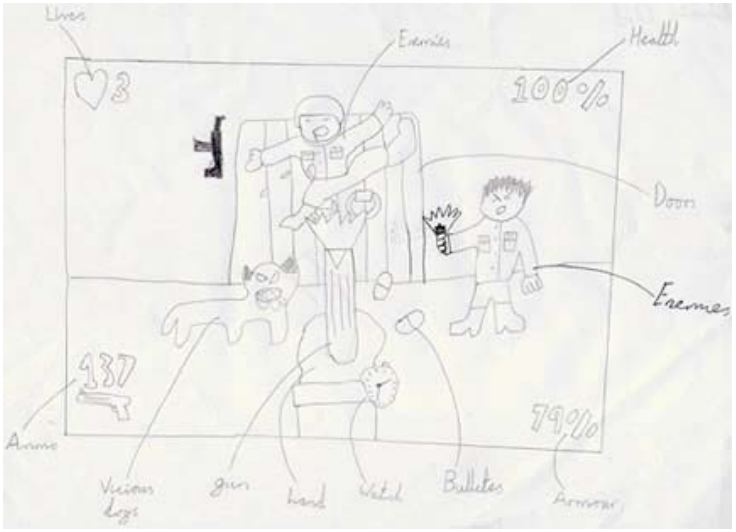

Figure 6: Paul's screenshot

Kate, Liz and Janet represent in one image the kinds of experiences that the player might encounter throughout the game. Their drawings are not meant to look like an actual still picture from a game, but to represent all the potentials of a game precisely without actualizing them. With visual images labeled objectively, low naturalistic modality[6] and the absence of vectors[7], the design principles underpinning these

[6] Modality is a measure of a message's reliability. A photograph is often assumed to have high modality, as it shows how things "actually are". A schematic diagram might be said to have low modality as it represents only a selection of features. However, the reliability of a message is not defined objectively, in terms of absolute truth, but in terms of the rules used by social groups. So a photograph in a scientific article might be judged to have lower modality than a diagram (Kress & van Leeuwen, 1996, p. 159).

drawings are similar to those used for the representation of analytical processes (Kress & van Leeuwen, 1996, p. 89). They are designed to present a static taxonomy of the whole game's essential attributes rather than represent a part of it in a life-like way.

Structurally organized as labels, it is the written text that identifies the function of the visual elements. Relations between represented participants[8] are also established through text; these participants are therefore visually decontextualised and so become generic, a "typical example", rather than connected to a particular location or moment in time – so in Janet's drawing, the fire engine is represented but not the fire. Colour is used primarily to differentiate rather than saturate the scene and the palette is relatively limited, removing the distractions that a vivid, visual spectacle might entail. The viewer is positioned broadly at eye level and at a distance, which has the effect of objectifying the scene. The background is left plain and the representation of depth reduced, with represented participants classified hierarchically across the page. In Liz's drawing, the planets to be visited are at the top of the page, the avatars in their current status across the middle and the buttons they can select from at the bottom. Objects are posed. In Janet's, the cars are identical and shown sideways. In Liz's and Kate's drawings, the avatars face the viewer, as they would in a photograph, but do not establish eye contact. The blank expression of Liz's characters depicts them as objects of contemplation rather than as subjects for the viewer to enter into an imaginary social relation with. The lack of a frame constructs the scene as an objective representation rather than a subjective response.

Just as in the interview, the three girls distance themselves from the genre categories taught in class, by combining elements from different game genres. Liz, for example, indicates that the actions in her game include shopping, jumping, bouncing, running, visiting and shooting, among others. In particular, the forms of interaction familiar from *The Sims* (Liz and Janet) and characteristic of the puzzle genre (Kate) are combined with shooting, dying and taking damage. These criterial aspects of the shooter genre are not, however, incorporated into the central space of the drawings, but added in at the sides or on the back, and often through written text. Liz's drawing does feature a gun, located centrally, but the character holding it is not aiming at anything. The shooter genre attributes are therefore presented as marginal. In Janet's and Kate's case, they do not contribute to the drawings' symmetry, and in Liz's, the operational function of the icon (the gun) is not included.

This suggests two things. Firstly, the girls' drawings are designed to present a conceptual representation of the essential features of games as a general category (the references to shooter games in Janet's and Kate's image serving to generalize a single representation; shooting games are often portrayed as representatives of games as a whole). Their aim is to carry out an analysis of a general phenomenon, that is, show a "typical" game screenshot. This way of seeing objects is characteristic of scientific

[7] Vectors establish transactional relations; they show someone doing something to someone else. Vectors can be established through gazes or gestures between participants. There are two kinds of vectors; between represented participants; and between represented participants and interactive participants (Kress & van Leeuwen, 1996, p. 44).

[8] Represented participants refer to the items represented in the drawing, including objects, people, settings, etc. Interactive participants are the people who communicate with each other through the image, the producers and viewers of the image (Kress & van Leeuwen, 1996, p. 119).

and academic contexts, which are characterized by an effort to reduce the individual to the general, and the concrete to its essential qualities. In adopting this perspective, the girls construct themselves as good academic students.

Secondly, the girls make reference to shooter games but keep these to the margins of their drawings. Their motivations may be double here. Whilst perceiving shooter games to be central to a representation of games in general, they do not wish to identify their own tastes with it. This is similar to the stance adopted by the three girls in the interview, who portrayed "action games" as marginal to their own preferences. At the same time, "action" or shooter games were depicted as representative of games in general, with other genres, such as platform or adventure games, barely getting a mention. In both sets of data, games are portrayed as being either violent or non-violent, a construction which sustains a view of games as gendered.

The girls' motives, I would argue, are to present themselves as academic students able to generalize from the particular, and simultaneously, to carry out this generalization in a gendered way. The point here is not so much that their drawings show how girls "see" games, but that this way of seeing games is intended to achieve a certain social purpose. Just as students' "reading" of games in the interview was intended to signal gender position, so their "writing", or production, of game designs cannot be understood without consideration of their desire to enact a gendered identity.

The boys' designs perform a similar kind of identity work. Whereas the representational structures in the girls' drawings are conceptual, depicting the subject matter in terms of its more or less stable and timeless essence, the representational structures in the boys drawings are narrative; they serve to present an unfolding drama, foregrounding pleasure arising from sensation and visual spectacle – features often celebrated in game magazines and deployed to construct games as masculine.

All three boys choose to represent an almost identical moment; one represented participant shoots down a number of others (in Jak's drawing, this is achieved through the representation of an "incoming missile" flying in from the left). In Tom's and Paul's drawings, the perspective and angle position the viewer as a player, and therefore as the protagonist in the represented narrative. The framing of the images enhances this, by indicating that the image shows a subjective field of vision. In deploying the conventions of game design to address the viewer directly and establish the narrative as subjective and personal, the image articulates a demand structure, which demands that the viewer/player take action, rather than contemplate the scene dispassionately. The form of action required is established through vectors (shooting guns, a target symbol at the end of the line established by the avatar's gun), and perspective. The diagonals in Tom's drawing, for example, create strong directional thrusts which lead the eye straight upwards. These imply a forward movement. In Jak's drawing, engagement with the viewer is sought at the level of visual spectacle rather than action, but the transactional process (the tank is under attack) and the use of colour suggests a desire to arouse an emotional, subjective response from the viewer.

The coding orientation[9] in all three drawings is sensory, allowing pleasure principles to dominate. In Tom's and Jak's drawing, this is achieved through colour, which becomes a source of pleasure and affective meaning; the brightness of the colours conveys excitement and adventure and the saturation instantiates a hyper-real modality which Kress and van Leeuwen associate with fantasy (1996, p. 168). In Paul's drawing, the viewer's sensory appreciation is invited through the size of represented participants (notably the gun and its falling shells) as well as the representation of certain physical details, such as the dog's drool and the drops of blood spurting out of the enemies. This emphasis on the senses is designed to discourage more distant, dispassionate forms of engagement. In all three drawings, written text is kept outside of the frame and repeats visual structures, but does not expand or elaborate on them. The game's icons are placed in the frame's corners and function primarily at a visual level. Written text, which is the preferred medium for representing abstract academic and scientific knowledge, is subjugated to the principles of the visual spectacle.

The drawings reproduce certain notions about the particular male pleasures of gaming. Alloway and Gilbert (1998), for example, argue that video game playing is "a recognisable social site within which to practise masculinity" precisely because of the ways it depicts violence (p. 108) – violence in video games is ritualistic, inviting the player to bask in the visceral, visual excitement of destruction and disengaging critical, reflective faculties: "most of the boys [in their study] had difficulty providing any critical reflection on the games they played in terms of storylines or violence, and the violence in the games was naturalised and made commonplace within their speech" (p. 111). Alloway and Gilbert argue that the boys are unconscious of the processes that shape them and educational interventions should focus on encouraging them to be more critical consumers. These conclusions, I would argue, omit the performative functions of students' discourses. How students interpret games, how they value, read and see them are social processes, learned over time and through interactions with others. But the texts they produce about games cannot be interpreted simply as a reflection of these determining processes. Instead, they are ways in which subjects come to constitute themselves as social beings. It is by constructing game texts as gendered that the students are able to construct themselves as gendered.

As in the interview, the three girls adopt a critical stance towards games, which is signified partly by combining game genres. We might also hypothesise that the sensory attractions which games are supposed to hold threaten the girls' academic identities – the literacy literature would suggest that girls find it less threatening to display academic competence than boys, and so adopting a conceptual approach to the study of games may be one way of signaling the female gender (Millard, 1997). The boys' approach tends to rearticulate the conventions of existing genres but in a very specific way. They could have picked any moment from a shooter game, including

[9] Coding orientations are the sets of principles which inform the way texts are coded by specific social groups, in specific institutional contexts. Kress and van Leeuwen distinguish between four types. (1) Technological coding orientations, which are designed to make the visual representation "effective" as a "blueprint". (2) Sensory coding orientations, which are used in contexts in which the pleasure principle is allowed to be dominant, such as certain kinds of food advertising. (3) Abstract coding orientations which are used in academic and scientific contexts to reduce the individual to the general. (4) Naturalistic coding orientation, which remains the dominant one in society and is used to address people as members of the same group (1996, p. 170).

scenes in which the avatar goes shopping or chats to other characters; such moments are not rare. What defines the shooter genre as masculine in popular representations of games is precisely the kind of scene that the students depict. This is why it is useful to turn to the notion of performativity. The drawings establish the social identify of the students. It is precisely because the producer and the viewer will each recognize and acknowledge the drawings as "gendered" that they remain effective as statements of gender identity.

The process is not unconscious, in the sense used by Alloway and Gilbert. In written homework, Jak emphasized the educational dimension of his game-playing, pointing to the historical accuracy of his WWII games. Although one of Liz' favourite game is *Crazy taxi*, according to the questionnaire, she excludes the racing genre from her drawing. The identities available to these students are framed within social discourses but are taken up as social action. The interesting question then becomes why particular constructions of social identity may be foregrounded in particular modes at particular times.

RETURNING TO THE RESEARCH QUESTIONS

If we return to the questions outlined at the start of this paper, we can now provide some provisional answers. Firstly, the analysis highlights some of the relationships between students' knowledge and experience of games outside the classroom and knowledge developed through formal study. The course reviewed the components and conventions of games through a structured pedagogic process, but the ways in which students demonstrated their understanding of games was informed not only by the curriculum we had covered but also by their own game-playing experience as well as certain well established discourses about games and their audiences.

In this research, there was a certain tension between these three sources of knowledge. Students' understanding of game design and game genres in their screenshot designs cannot be evaluated without considering the ways in which they sought to position themselves through their work. The boys and the girls do not use the same criteria to evaluate what might count as a screenshot in the context of an academic course on games. Given that a similar kind of positioning took place in the group interview, it is reasonable to assume that this is not simply a question of the different ways students responded to the course. The drawings were designed in part to signal a particular social affiliation. However, this affiliation was not already given or pre-imposed but negotiated by the students to achieve different and sometimes incompatible social purposes. This has particular relevance for the teaching of genre, which is best conceived as a form of social interaction rather than a set of formal textual properties. The way students classify games into genres and use genre terminology not only reflects cognitive understanding but also motivated social action. The course we developed was useful for examining the components of games, but could have found better ways of enabling students to explore how they assumed meaning in their own lives.

Secondly, the analysis raises questions about research that divides games into girl and boy-friendly titles and ascribes relatively stable preferences to each gender. Access to games is gendered; girls are somewhat less likely to have personal use of a console

and boys seem more likely to have access to a wider range of game titles. Although individual cases often contradict this general trend, it remains significant in the way students position themselves in relation to games. Students draw on and display a knowledge of games to achieve certain ends, and in the data reviewed here, to establish themselves as gendered. This sometimes leads them to deny certain of their experiences and reproduce certain well-known stereotypes. But it is precisely because the students are aware of gender stereotypes within games that they remain effective (from the students' point of view) as performative discourses. Butler (1999a; 1999b) suggests that the regressive politics according to which subjects constitute their gender identities may be undermined through subversive repetition and parody. Rather than expect students to critique the gender politics surrounding games and game playing, or trying to set design briefs which maintain an "egalitarian ideology", Butler's argument would suggest that it is precisely by over-identifying with established gender positions that students may come to realize their artificiality and so achieve some kind of distance from them. Direct criticism of gender stereotypes is unlikely to be productive in securing different identity politics. The strategy instead should perhaps be defined in terms of allowing students to recognize the social functions which a particular discourse or design allows them to achieve, and in so doing, also recognize its fabricated nature. This might be one way of understanding the notion of "critical literacy".

Thirdly, comparing oral and visual data highlights that a social definition of literacy works across modes. This is an obvious point, but it perhaps reinforces the argument for understanding literacy as a competence which can be developed and evaluated multimodally. This has implications for assessment in media education, which often depends on verbal language alone. In the context of our research, it also highlights the importance of practical work in teaching games. In making games, students would put into practice some of the design ideas developed here through oral and visual modes. They could then make a judgment about the final result – what it means in terms of playing experience, audience response, feedback from the teacher and from peers, and so on. By becoming producers of games, students can explore the relationship between the internal design principles of games and the external social purposes they are used to fulfil, highlighting that the way we constitute our identity through games is not directly inscribed into their design properties but hinges on the network of social relations that always over-determine the way games assume meaning. This approach requires students to be able to use games (as opposed to spoken language or visual images alone) as a means of communication and representation. The data analysed in this paper tells us how students "read" game texts in certain social situations, and inform how they might learn to read and write games in different ways.

However, many of the points raised by the data are not specific to games – students will constitute their identity around books, films or any number of cultural phenomena using similar processes. The argument for studying games presupposes, however, that there is something specific about games as a medium – a specific grammar or design practice. This will include aspects that relate to all or most media, such as narrative, mode of address and representation, as well as elements that are specific to games, such as rules, goals, systems, economies and conditionality. It is only in gaining an understanding of these grammars that students will be able to express themselves through games, and as a consequence develop competence in and understanding of an important contemporary mode of communication.

The research highlights the value of studying popular texts such as games in school. These play an important role in young people's culture and in the development of their sense of self as well as their relations with others. This applies whether students are enthusiastic readers of such texts or more dispassionate critics. It would not make sense, then, to argue that studying games is only of benefit to boys or keen game players. The value of using games in English and Media studies classrooms is not primarily to motivate particular students be more engaged with literacy learning, but to develop understanding of the kinds of texts which shape students' lives. This includes examining how such texts provide enjoyment and pleasure as well as help fulfil social functions. The educational argument for studying games, therefore, is that students use these texts to make sense of the world and that it is also possible and desirable to intervene in this process of interpretation and production.

ACKNOWLEDGEMENTS

This research is generously supported by the Paccit Link programme: http://www.paccit.gla.ac.uk/.

REFERENCES

Alloway, N., & Gilbert, P. (1998). Video game culture: Playing with masculinity, violence and pleasure. In S. Howard (Ed.), *Wired-up: Young people and the electronic media* (pp. 95-114). London: UCL press.

Austin, J. (1975). *How to do things with words*. Oxford: Clarendon Press.

Barton, D., Hamilton, M., & Ivanic, R. (Eds.). (2000). *Situated literacies: Reading and writing in context*. London: Routledge.

Beavis, C. (1998). Computer games, culture and curriculum. In I. Snyder (Ed.), *Page to screen: Taking literacy into the electronic age* (pp. 234-255). London: Routledge.

Bryce, J., & Rutter, J. (2003). The gendering of computer gaming: Experience and space. In S. Fleming & I. Jones (Eds.), *Leisure cultures: Investigations in sport, media and technology* (pp. 3-22). University of Brighton, Eastbourne: Leisure Studies Association.

Buckingham, D. (1993a). *Changing literacies: Media education and modern culture*. London: Institute of Education.

Buckingham, D. (1993b). *Children talking television: The making of television literacy*. London: The Falmer Press.

Buckingham, D. (2003). *Media education: Literacy, learning and contemporary culture*. Cambridge: Polity Press.

Burn, A. (2004). From *The Tempest* to *Tomb-Raider*: Computer games in English, media and drama. *English, Drama, Media. The magazine of the National Association for the Teaching of English, June*, 19-25.

Burn, A., & Parker, D. (2003). *Analysing media texts*. London: Continuum.

Butler, J. (1993). *Bodies that matter: On the discursive limits of sex*. London: Routledge.

Butler, J. (1994). *Extracts from "Gender as performance: An interview with Judith Butler". Interview by Peter Osborne and Lynne Segal, London, 1993*. Retrieved November 13, 2004, from www.theory.org.uk/but-int1.htm.

Butler, J. (1999a). *Gender trouble: Feminism and the subversion of identity* (2nd ed.). London: Routledge.

Butler, J. (1999b). Performativity's social magic. In R. Shusterman (Ed.), *Bourdieu: A critical reader* (pp. 113-128). Oxford: Blackwell.

Cassell, J., & Jenkins, H. (Eds.). (2000). *From Barbie to* Mortal Kombat*: Gender and computer games*. Cambridge, MA: MIT press.

Cope, B., & Kalantzis, M. (Eds.). (2000). *Multiliteracies: Literacy learning and the design of social futures*. London: Routledge.

Gee, J. (2000). The New Literacy Studies: From "socially situated" to the work of the social. In D. Barton, M. Hamilton & R. Ivanic (Eds.), *Situated literacies: Reading and writing in context* (pp. 180-196). London: Routledge.

Hodge, R., & Kress, G. (1988). *Social semiotics*. Cambridge: Polity Press.

Kafai, Y. (1996). Gender differences in children's constructions of video games. In P. Greenfield & R. Cocking (Eds.), *Interacting with video* (pp. 39-66). Norwood, NJ: Ablex.

Kress, G. (1997). *Before writing: Re-thinking the paths to literacy*. London: Routledge.

Kress, G., & Leeuwen, T. (1996). *Reading images: The grammar of visual design*. London: Routledge.

Kress, G., & Leeuwen, T. (2001). *Multimodal discourse: The modes and media of contemporary communication*. London: Hodder Headline.

Millard, E. (1997). *Differently literate: Boys, girls and the schooling of literacy*. London: Falmer Press.

New London Group (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review, 66*(1), 60-92.

Orr Vered, K. (1998). Blue Group Boys play *Incredible Machine*, girls play Hopscotch: Social discourse and gendered play at the computer. In J. Sefton-Green (Ed.), *Digital Diversions: youth in the age of multimedia* (pp. 43-61). London: UCL Press.

Rowan, L., Knobel, M., Bigum, C., & Lankshear, C. (2002). *Boys, literacies and schooling: The dangerous territories of literacy reform*. Buckingham: OUP.

Thomas, A., & Walkerdine, V. (2000). *The girl as a cyberchild.* Paper presented at the Association of Internet Researchers' Conference, Kansas, US.

Manuscript received: January 15, 2005
Revision received: April 5, 2005
Accepted: April 26, 2005