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Research methodologies in creative practice: literacy in the digital age of the twenty first century - learning from computer games

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Research Methodologies in Creative Practice: Literacy in the Digital
Age of the Twenty First Century - Learning from Computer Games[1].
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Introduction

Literacy remains one of the central goals of schooling, but the ways in which it is understood are changing. The growth of the networked society, and the spread of Information and Communications Technologies (ICT), has brought about significant changes to traditional forms of literacy. Older, print based forms now take their place alongside a mix of newer multi-modal forms, where a wide range of elements such as image, sound, movement, light, colour and interactivity often supplant the printed word and contribute to the ways in which meaning is made. For young people to be fully literate in the twenty-first century, they need to have clear understandings about the ways in which these forms of literacy combine to persuade, present a point of view, argue a case or win the viewers' sympathies. They need to know how to use them themselves, and to be aware of the ways in which others use them. They need to understand how digital texts organise and prioritise knowledge and information, and to recognise and be critically informed about the global context in which this occurs. That is, to be effective members of society, students need to become critical and capable users of both print and multimodal literacy, and be able to bring informed and analytic perspectives to bear on all texts, both print and digital, that they encounter in everyday life.

This is part of schools' larger challenge to build robust connections between school and the world beyond, to meet the needs of all students, and to counter problems of alienation and marginalisation, particularly amongst students in the middle years. This means finding ways to be relevant and useful for all students, and to provide them with the skills and knowledge they will need in the ICT-based world of the Twentyfirst
century. With respect to literacy education, engagement and technology, we urgently need more information as to how this might be best achieved.

Research questions

Learning more about how young people interact with texts outside of school has the capacity to provide insights and information to strengthen the teaching and critical

analysis of both multimodal and traditional print texts, and to increase engagement for students currently disinterested or marginalized. The project on which this paper

reports investigates ways in which English and literacy education might benefit from examining popular digital culture, and the ways in which young people make use of it, to improve the teaching of print and multimodal forms of literacy. It takes computer games as examples of global, ICT-based popular culture, where meaning is built from multimodal elements, and where young players have to be actively learning and involved in order to play and works with English teachers and students who are computer games players in five Victorian Secondary Schools to address five main questions:

What kinds of texts are computer games, and how do they combine multimodal elements to create meanings and values?

What kinds of literacy and learning practices are adolescents involved in as they play computer games; how do they make sense of them, and how are they affected by them?

What do computer games and adolescents' engagement with them have to teach us about how to teach both print and multimodal texts and literacies, and to update and strengthen English and literacy curriculum?

How can we use teaching and learning about multimodal texts to increase the literacy levels and engagement of marginalised students, particularly boys and those in the middle years?

What kinds of approaches, models and resources are needed to support teachers in the development and implementation of ICT-based curriculum that addresses both print and multimodal forms of literacy?

To address these questions the project brings together a team from Deakin University, the Research and Innovation section of the Victorian Department of Education and Early Childhood Development Training, the Victorian Association for the Teaching of English and the Australian Centre for the Moving Image. Through a combination of an online survey, close study of individual expert games players, analysis of a range of popular computer games, the development of a model for games analysis and education, and a three year program of action-research based professional development, the project aims to develop detailed and specific information for teachers about the forms literacy takes in multimodal texts generated by ICT. It sets out to identify the kinds of literacy practices young Australians are engaged in as they play computer games, to identify the ways in which computer games shape young people's values and sense of identity, to develop, trial and evaluate a model for computer games education and teacher professional development and to develop classroom approaches for analysing and digital texts such as computer games, and for teaching with and about such texts to strengthen understandings of both print and multimodal forms of literacy.

Researching computer games and literacy

The project responds to calls for schools to recognise and respond to rapidly changing forms and definitions of literacy brought about by ICT (Kress 1997; New London Group 1996) and to develop e-learning approaches to teaching and curriculum that reflect the central role of technology in the twenty-first century. Contemporary definitions of literacy emphasise the expansion brought about by ICTs in the 'changed communicational landscape' (Kress 2000) of the present day. Luke, Freebody and Land (2000:20) define the literacy young people need in this new context as 'the sustained and flexible mastery of a repertoire of practices with the texts of traditional and new communications technologies via spoken language, print and multimedia'. There is increasing interest world wide in investigating the roles and possibilities offered by computer games for education. There are three main directions in research

into digital games and education: studies into the use of commercial games to support curriculum and teaching in the classroom (Williamson and Facer 2004; Kirriemuir and McFarlane 2004; McFarlane, Sparrowhawk and Heald 2002); the 'Serious Games movement which seeks to adapt the qualities and features of computer games to develop engaging and interactive simulated learning environments and argues that games have the power and potential to transform education from its current, printbased

form (Shaffer, Squire, Halveston and Gee forthcoming; Prensky 2001); and studies which explore young people's out of school engagement with digital culture to learn more about contemporary experiences of literacy, learning and global change in informal contexts, and to consider the implications of such experiences for teaching and learning in school.

This research falls into the third category. Insights into the kinds of texts and literacies generated by ICT are arguably most readily visible and available in popular digital culture such as computer games. With respect to literacy, computer games are archtypal exemplars of the ways in which ICTs are changing forms of text and narrative, 're-mediating' older forms (Bolter and Grusin 2000) and functioning as self contained universes of meaning, or 'networked semiotic domains' (Gee 2003). Located within a broader body of research into literacy, digital culture and informal learning (eg Alverman 2000; Carr, Buckingham, Burn and Schott (2006), Sefton Green 1998, 2004) there is a small but growing number of studies that explore the implications of young people's engagement with computer games for multimodal notions of language and literacy (eg Gee 2003; Pelletier 2005, Beavis 1997, 2002). It argues for the systematic study of commercial computer games in school as texts in their own right, and that studying games and young people's engagement with digital culture might provide the basis for identifying new forms of literacy and literacy practice, improve teaching about current and emergent forms of literacy, and provide insights and directions for the development of future literacy curriculum. While a small number of individual case studies have been undertaken in Australia and internationally there are as yet no wide scale studies to investigate the ways in which computer games might be used within English classrooms to teach an expanded notion of literacy, nor any systematic use of new knowledge drawn from young people's engagement with computer games to strengthen English and literacy teaching.

All students need to be fully literate and schools, systems and teachers need to find ways to ways to prepare young people to have the literacies they will need for living and learning in the twenty-first century. In addition, schools systems and teachers need to find ways to actively promote the integration of ICT and 'elearning' to enhance student learning experience and help them develop skills to use the new technologies. A high priority for education is helping students develop positive attitudes towards learning and fundamental skills in literacy. The 'missing link' for many disengaged students, particularly in the middle years, is the perceived lack of connection between school and the ways they experience the outside world. In part, this means schools need to recognise the rich and complex nature of the networked society, and young people's location within it, and the kinds of pressures, demands and possibilities on offer through their participation in global culture. They need to find ways to build stronger links between this world, teaching approaches and curriculum. Research where computer games have been brought into the classroom as means or objects of study (eg Beavis 2001, 2002, 2004; McFarlane, Sparrowhawk and Heald 2002) also suggests that studying such texts increases both the engagement

and literacy levels of students, particularly boys, who are less successful with traditional print literacy and less engaged in the curriculum and school. These findings are consistent with the findings and recommendations of the 2002 DEET report, *Boys, Literacy and Schooling*, which that working with multimodal texts and
literacies was an effective way to increase the engagement, critical perspectives and literacy skills of many otherwise disinterested and disenfranchised boys (Alloway, Freebody, Gilbert and Muspratt, 2002).

In making computer games the focus of a study of ICT-based, multimodal forms of text and literacy the study recognises the pervasive role of global digital culture in young people's lives. It provides the opportunity to explore the implications of that involvement for literacy, identity and curriculum. In valuing young people's expertise with forms of literacy not necessarily recognised in traditional curriculum, it makes that expertise available as a resource for reconceptualizing English and literacy teaching.

Research Design

To understand the complexity of computer games, the ways in which young people read and interact with them and create new texts in doing so, and the implications and possibilities games and game play offer for understanding digital literacy and literacy practices, the study juxtaposes analytic frameworks of different kinds – literary, dramatic, semiotic and pedagogical. It is organised around three strands: Computer games as textual forms, young people and global digital culture, and professional development and computer games education.

The strand taking games as its primary focus involves the textual analysis of popular computer games, typically played by young people in the middle years. It focuses on the nature of computer games as text and the ways in which multimodal forms combine to make meaning, create narratives and shape values and ideologies. Data gathering is primarily located at the Australian Centre for the Moving Image. Students' game play is observed and filmed, and individual and focus group interviews carried out by the research team on each occasion. Selected games are played through by team members to provide an informed context for understanding student play, and to enable the analysis of issues of textuality, narrative and ideology (eg Bradford 2008).

A second strand focuses on young people and global digital culture. This strand investigates and documents the ways in which adolescents are positioned within global culture and the implications of their immersion in digital popular culture for literacy, pedagogy and identity. It explores the ways in which they 'read' and interact with games, and the kinds of literacies and literacy practices they are engaged in as they play online at home or in community spaces such as specialist internet cafés. This strand is also concerned with the role of games, particularly multiplayer games, in young people's developing sense of identity and community. The starting point for data gathering, primarily field notes and interviews, is at schools, with selected students followed up their out of school leisure sites.

The third strand focuses on teachers. Working collaboratively, it entails the use of an action research approach to develop a model to use in the classroom to teach with and about computer games, including frameworks for analysis and the development of pedagogies and approaches to maximise engagement and more effectively teach both print and multimodal texts and literacies.

The project draws on a range of theoretical resources to analyse and make use of the data generated. It utilises three theoretical frameworks to analyse the texts and young

people's engagement with them, and a fourth to structure the organization of the professional development model and provide a basis for the action research projects planned around ICT:

A framework for analysing narrative, structure and ideology in multimodal texts. A range of models from the fields of children's literature, digital culture, drama and semiotics, drawing on literary and play theory and grammars of visual design will be adapted to analyse the structures, ideologies and features of games (Arseth 1997; Albright, Purohit and Walsh 2007; Bradford 2003, 2006; Kress and Van Leeuwin 1996; O'Mara 2003).

A media and cultural studies based approach that brings together institutions, texts and audiences to provide a generative framework for understanding both texts and the social and literacy practices surrounding them. (Buckingham 2000; Buckingham and Sefton Green; Sefton-Green 1998)

A sociological framework for understanding the functions and consequences of digital literacies in the lives of adolescents and their embeddedness in games culture, global marketing, school contexts and literacy education (Albright, Purohit, and Walsh 2006; Bourdieu and Wacquant 1992; Carrington and Luke, 1997).

A 3-D model about literacy, pedagogy and ICT for teachers to engage in collaborative research with their students to explore and analyse digital texts and their engagement with them (Durrant and Green 2000). In its emphasis on context, its holistic cultural-critical view of literacy-technology and its integrated view of literacy practices and pedagogy, this model for professional development and curriculum complements the textual, cultural and sociological frameworks used to analyse data generated by interviews, observations and game play.

Four schools formed the kernel of the research, with a fifth school coming on board in 200. The five schools, two inner urban state secondary schools, two large Catholic boys schools – one in outer Melbourne and one in a country town two hours from Melbourne - and one large independent school, became involved by virtue of teacher interest in new media, popular culture and multimodal literacies, and the demographic and social diversity of their cohorts. Participating teachers are working across the three years of the project to undertake action research projects, developing case studies of the leisure time literacy practices of one or more of their students, trialling approaches to teaching with or about digital texts and literacies, or exploring options for using insights gained from observing young people's out-of-school literacy experiences and practices to support the teaching of in-school traditional print literacy.

A three year program

In 2007, the first year of the project, a survey of students' experiences, preferences and computer game playing choices and experience was undertaken with students at each school, to generate large scale information about young Victorians' knowledge of and practices around computer games, and to identify the most popular games and genres. This survey provided a broadly based context against which case studies of individual students and games could be read, and fed into the construction of interview and focus group questions and research. It generated information for the choice of games for students to play on visits to the Australian Centre for the Moving Image, and may be used to identify the two students per school who will become longitudinal case study subjects for individual follow up in their leisure time. Twelve students from each participating school visited the ACMI Games Lab to play selected

games for two hours on each occasion, and to be interviewed in groups or individually. The professional development program began, with teachers planning for their work in schools, and the first round of interviews with students in each school took place towards the end of the year.

In 2008, classroom based projects in schools began. Throughout the year, teachers and the research team worked together to plan, observe and document a variety of classroom units concerned with different games and aspects of game play linked to literacy and curriculum in multiple ways. Projects included a class-based wiki exploring issues related to computer games and game play, case studies of individual students, curriculum units on games specific games such as the 'fantasy football' game based on Australian Rules Football, *SuperCoach* (HeraldSun 2008), The *Simpsons Hit and Run* (and a unit taught by a student teacher in one school on The Macdonalds Game and assignments based on visits to the *Game On*$_2$ exhibition hosted at the Australian Centre for the Moving Image during the year. This year also saw the initial development of a Model for teaching with and about games and literacy, to be trialled and further developed in 2009.

Other activities planned for 2009 include further action research and school based including work incorporating Drama and the use of *Game Maker* to develop and play

with games, and a webquest organised around Bogost's notion of Procedural Rhetoric (Bogost 2008). Groups of students will again be brought to the Australian Centre for the Moving Image for further observation and analysis of game play. An additional round of interviews will take place, case studies of individual games players will be further developed, and the Model for games and literacy developed in 2008 will be trialled and refined. Teachers will also be engaged in writing workshops and the preparation of a book of teacher authored case studies and resources. Analysis of specific games by team members will continue, and the project will conclude with a minconference, devoted to learning from digital culture to improve the teaching of print and multimodal literacies, at which the teachers' work, the Model and the findings of the project will be presented.

2 *Game On*, Australian Centre for the Moving Image 2008. Exhibition organised and toured by PBarbican Art Gallery which is owned and funded by the City of London Corporation.

Conclusion: Paradoxes and problematics in researching literacy, kids and
computer games

The methodological challenges entailed in researching kids, computer games and literacy require a mix of perspectives and methodologies that are sensitive to the complexity of the enterprise. Paradoxes and problematics include such matters as the location of research on largely out-of-school literacies within the context of the school, the selectivity of what students are prepared to show, (and of what adults may be able to see), within the online world, the need for researchers to be familiar with games at the same time as recognising that their adult experience is necessarily qualitatively different from those of the students they observe, and the ways in which what constitutes 'the game' is itself in some ways different for every player, at the same time as games are both fixed and fluid, interactive and predetermined, with agency functioning in paradoxical ways. The mix of tools and approaches outlined above, coupled with the active partnership with teachers and schools, positions us well to be alert to issues such as these, and to weave our way carefully through in the hope of learning more about what computer games and young people's engagement with them have to tell us about the teaching of both digital and traditional literacies.

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